



Taylor & Mulder

Property and Casualty Consulting Actuaries

MISSOURI PETROLEUM STORAGE TANK INSURANCE FUND

LOSS AND LOSS ADJUSTMENT EXPENSE RESERVE ANALYSIS AS OF JUNE 30, 2018

SEPTEMBER 2018

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September 19, 2018

Ms. Carol Eighmey
Executive Director
Petroleum Storage Tank Insurance Fund
P.O. Box 836
Jefferson City, MO 65102

RE: ACTUARIAL ANALYSIS OF THE PETROLEUM STORAGE TANK INSURANCE FUND AS OF JUNE 30, 2018

Dear Ms. Eighmey:

Enclosed is the actuarial review of the loss and allocated loss adjustment expense reserves of the Missouri Petroleum Storage Tank Insurance Fund as of June 30, 2018.

The first section in the text of our report is the Executive Summary section. This section presents our Conclusions and Recommendations. It also describes the Purpose and Scope of our report, explains the Distribution and Use of our report, and provides the Conditions and Limitations underlying our work. This section of our report includes the Background section which provides information about the PSTIF program history.

The next section of the text of our report is the Actuarial Analysis section that describes the sources of data, our overall methodology, the selection of factors and specific methodologies and considerations by line of business. It also describes the selection of ultimate losses, and loss reserve discounting. The Exhibits section of our report follows the text of the report and includes all of our analyses.

Please feel free to call if you have any questions regarding any aspect of our report.

Sincerely,

Daniel W. Lupton, FCAS, MAAA, CSPA, MBA

Jane C. Taylor, FCAS, MAAA, JD

E. Toni Mulder, FCAS, MAAA, FCA

Enclosures

Missouri Petroleum Storage Tank Insurance Fund

Loss and Loss Adjustment Expense Reserve

Analysis as of June 30, 2018

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Executive Summary

Purpose and Scope

Taylor & Mulder, Incorporated ("T&M") was requested by the Board of Trustees ("Board") of the Missouri Petroleum Storage Tank Insurance Fund ("PSTIF") to conduct an actuarial review of the PSTIF's loss and loss adjustment expenses reserves as of June 30, 2018. This report contains our summary, conclusions and recommendations along with a description of the analysis underlying our conclusions.

Specifically, T&M was asked by the Board to conduct an actuarial analysis to include within its scope the following tasks:

- A review and opinion on the adequacy of current claim reserves of PSTIF,
- A projection of PSTIF's future claim liabilities, including an estimate on future claim severity and frequency, separately for each claim type, and
- An analysis of PSTIF's large loss claims, including:
 - Information on the typical lag time between the time when a claim is opened and the time it is identified as a "large loss claim,"
 - The history of losses and reserving practices on "large loss claims," and
 - Information on how "large loss claims" are expected to impact the PSTIF's future finances.
- An estimation of the claims impact on PSTIF's financial position of the December 31, 2025 sunset provision in the enabling legislation.

This report presents the results of those analyses. This report was prepared by Daniel W. Lupton, FCAS, MAAA, MBA, Vice President and Consulting Actuary, Jane C. Taylor, FCAS, MAAA, Principal and Consulting Actuary and E. Toni Mulder, FCAS, MAAA, FCA, President and Principal and Consulting Actuary.

In accordance with the requirements of the Actuarial Standards of Practice in making statements of actuarial opinion, we provide the following statements:

I, Daniel W. Lupton, am an Officer and Consulting Actuary in the firm of Taylor & Mulder, Inc. I am a Fellow of the Casualty Actuarial Society in good standing and qualified to issue a Statement of Actuarial Opinion. I am also a Member of the American Academy of Actuaries.

I, Jane C. Taylor, am Principal and Consulting Actuary in the firm of Taylor & Mulder, Inc. I am a Fellow of the Casualty Actuarial Society in good standing and qualified to issue a Statement of Actuarial Opinion. I am also a Member of the American Academy of Actuaries.

I, E. Toni Mulder, am President and Principal and Consulting Actuary in the firm of Taylor & Mulder, Inc. I am a Fellow of the Casualty Actuarial Society in good standing and qualified to issue a Statement of Actuarial Opinion. I am also a Member of the American Academy of Actuaries.

Background

In the early 1980s, the federal government recognized that an underground storage tank (“UST”) could present an environmental hazard. At the time, many underground petroleum tanks were fabricated of unprotected steel which was subject to corrosion and deterioration leading to contamination of the surrounding soil and, perhaps more importantly, nearby groundwater. By 1984, legislation was in place to permit the Environmental Protection Agency (“EPA”) to set standards for tank design, installation, and protection to minimize the danger of future releases of petroleum or other hazardous chemicals stored underground. Over the years since, there have been additional EPA standards and regulations for tanks to further strengthen measures to protect the environment and groundwater. Included in these rules are requirements for tank owners/operators to have minimum levels of financial resources to deal with leaks and spills that might occur. In Missouri, this financial requirement is generally met by the purchase of insurance, either commercially or through the PSTIF.

Missouri responded to the federal actions and established the PSTIF in 1989 to assist owners/operators of underground storage tanks in meeting federal financial responsibility rules. In 1992, the PSTIF began offering insurance to underground tank owners/operators to pay for the costs associated with petroleum leaks and spills in the state of Missouri. This coverage is provided on a claims-made basis.

The initial legislation enabling the PSTIF had a sunset date of December 31, 1998. Additional legislative actions have moved the date to 2003, 2010, 2020, and finally to the current December 31, 2025 sunset date. Consequently, all projections performed by T&M in this report assume a December 31, 2025 sunset date. PSTIF will be responsible for the cost of claims reported to it as of December 31, 2025. Claims reported after that date will not be handled by PSTIF without further legislation extending the sunset date.

House Bill No. 1364, effective August 28, 2018, was the most recent legislative action extending the fund's sunset date to December 31, 2025. In addition, the bill called for establishment of a task force of the general assembly, known as the "Task Force on the Petroleum Storage Tank Insurance Fund," to be composed of eight members with the goal of researching and compiling a report for delivery to the general assembly by December 31, 2018 on the following:

1. The efficacy of the petroleum storage tank insurance fund and program;
2. The sustainability of the petroleum storage tank insurance fund and program;
3. The administration of the petroleum storage tank insurance fund and program;
4. The availability of private insurance for above and below ground petroleum storage tanks, and the necessity of insurance subsidies created through the petroleum storage tank insurance program;
5. Compliance with federal programs, regulations, and advisory reports; and
6. The comparability of the petroleum storage tank insurance program to other states' programs and states without such programs.

This section of the bill expires on December 31, 2018.

In 1995, the Missouri mandate for protection was expanded to include cleanup of petroleum contamination from certain uninsured leaks and spills. Uninsured risks included operations that had been closed prior to December 31, 1997. Therefore, the PSTIF pays for remediation costs associated with uninsured aboveground and underground storage tanks that were taken out of use by December 31, 1997, even when the tanks were never covered by the PSTIF. In some cases, petroleum releases went undetected (for example, at old gas stations) for many years. When soil or water tests reveal petroleum contamination as a result of such disused sites and a party is identified who is willing to assume responsibility for directing remediation efforts, PSTIF will pay for the remediation associated with that leak or spill subject to certain criteria and after a deductible.

In 1996, PSTIF was opened to aboveground storage tank (“AST”) owners/operators to voluntarily purchase protection. Then in 2008, the Missouri legislature mandated that AST owners/operators demonstrate financial responsibility for liability arising from any leak or spill beginning in 2011. This increased the number of ASTs covered by PSTIF.

Extended reporting endorsements permit the reporting of claims for a period of up to five (5) years after the tank is retired from service or sold. PSTIF began offering extended reporting endorsements for AST owners/operators taking tanks out of service in 2002. Beginning in 2004, UST owners/operators have been able to buy an extended reporting endorsement. However, no extended reporting endorsements will cover claims reported after December 31, 2025, the sunset date in the most recent legislation.

In contrast to many such state funds, which often act more as government grant programs than insurance programs, the PSTIF requires tanks owners/operators to complete an application and be approved to receive a coverage document. The coverage document is either the Underground Storage Tank Participation Agreement or the Aboveground Storage Tank Pollution Liability Participation Agreement depending on the type of tank provided coverage. The application and approval process allows PSTIF to enforce compliance with ever-developing standards for tanks and the associated piping.

In the event that a leak or spill is discovered after the retroactive date of the PSTIF coverage (the date at which coverage initially attaches), PSTIF will pay for the first \$1,000,000 of the costs per event, subject to a \$2,000,000 annual aggregate. Each event carries a \$10,000 deductible.

PSTIF storage tank claims are categorized into the following groups:

- Insurance UST – Release: Underground storage tank petroleum releases from insured tanks;

- Insurance UST – Closure: Underground storage tank petroleum releases from insured tanks that were discovered when the tank was being removed from an insured site;
- Insurance UST – Other: Underground storage tank petroleum releases from insured tanks that do not fit into either of the above categories;
- Remedial UST: Cleanup costs associated with remediation of uninsured underground storage tank sites that were taken out of use prior to the deadline set by the Missouri Legislature;
- Insurance AST: Aboveground storage tank petroleum spills from insured tanks, and
- Remedial AST: Cleanup costs associated with remediation of uninsured aboveground storage tank sites that were taken out of use prior to the deadline set by the Missouri Legislature.

Terms Defined

| | |
|--------------------|---|
| ALAE | Allocated Loss Adjustment Expense (“ALAE”) is the amount of money spent on a particular claim to the benefit of an insured, the amount that can be allocated to a single claim. These expenses include the attorneys’ fees, expert witnesses, collection and protection of material germane to the claim, etc. For the PSTIF, ALAE does not include Third-Party Administrator (“TPA”) expenses. |
| Claims-Made | Claims-made coverage is a type of insurance coverage that provides protection for the insured on claims reported during the coverage period given that the incident giving rise to the claim occurred on or after the Retroactive Date (“retro date”). The retro date is usually the date the first claims-made coverage was issued to the insured. Coverage provided by PSTIF attaches on a claims-made basis. |

Claims-made coverage may be contrasted to occurrence coverage, which responds to claims brought against the insured given that the incident giving rise to the claim

occurred during the coverage period. Both private passenger automobile and homeowners' policies are written on an occurrence basis.

Claim Frequency Claim frequency is the average number of claims per insured exposure. For PSTIF, an insured exposure is one tank insured for one year. For example, if 250 claims are reported in a year with 10,000 insured tanks, the claim frequency (average number of claims per insured exposure) is $250 / 10,000$ insured tanks = 0.025 claim per tank.

IBNR Incurred But Not Reported ("IBNR"), strictly speaking, is a reserve derived by actuaries for claims not as yet reported to the insurer for which premium has been earned and for which the insurer is responsible. Under this narrow definition of IBNR, claims-made coverages would not have IBNR as all claims are known at the end of the coverage period (or soon thereafter). However, the term IBNR for claims-made coverage is used in a broad sense and includes changes in incurred amounts (i.e., paid plus case reserves) for known claims.

Claim estimates done by a claim department or TPA must rely on information about the claim at a point in time. The available information may be lacking in important details that will greatly impact the ultimate cost of the claim. Actuaries review the data from the aggregated claims data by year as it changes over time, from the first report of the claim to settlement. From these reviews, the actuary can calculate factors to apply to current case data to estimate the ultimate costs of a body of claims.

The difference between estimated ultimate values and current case incurred is IBNR.

Because coverage provided by the PSTIF is claims-made rather than occurrence, all references to IBNR in this report will typically refer exclusively to development on known claims unless otherwise noted.

| | |
|---------------------|--|
| LAE | Loss Adjustment Expense (“LAE”) is the sum of Allocated Loss Adjustment Expense (“ALAE”) and Unallocated Loss Adjustment Expenses (“ULAE”) and represents the total costs of handling and defending claims. |
| LDF | A Loss Development Factor (“LDF”) is calculated by an actuary from historical claim data and applied to current paid or incurred values to estimate ultimate claim costs for an insurer. |
| Pure Premium | Pure Premium is the average cost of insurance per covered exposure. For PSTIF, a covered exposure is one tank insured for one year. An example might help clarify the concept. If two tanks are covered and one has a claim for \$100, then the pure premium (average loss per covered exposure) is $\$100 / 2$ covered tanks = \$50 |
| Severity | Severity is the average size of claim for a given collection of claims. For instance, if the total cost for three claims is \$45,000, the claim severity (average size of claim) is $\$45,000 / 3$ claims = \$15,000 severity. |
| ULAE | Unallocated Loss Adjustment Expense (“ULAE”) represents the expenses. For the Fund, ULAE represents costs associated with the TPA. |

Conclusions

Loss and Allocated Loss Adjustment Expense Reserve Adequacy

T&M analyzed loss and loss adjustment expense reserves for the six broad categories of claims enumerated above. The following table shows the results of our analysis for these categories:

| Missouri Petroleum Storage Tank Insurance Fund Undiscounted Unpaid Loss & ALAE as of June 30, 2018 | | | | |
|---|-------------------------|-------------------|--------------------|-------------------------------|
| Claim Type | Case Outstanding | IBNR | Unpaid ALAE | Unpaid Loss & ALAE |
| Insurance UST - Release | 6,665,892 | 5,200,853 | 77,890 | 11,944,635 |
| Insurance UST - Closure | 10,796,300 | 4,805,357 | 102,405 | 15,704,062 |
| Insurance UST - Other | 6,608,138 | 9,118,534 | 103,225 | 15,829,897 |
| Remedial UST | 19,415,970 | 4,393,197 | 156,277 | 23,965,443 |
| Insurance AST | 10,296,657 | 3,182,016 | 88,470 | 13,567,144 |
| Remedial AST | 2,310,237 | 677,910 | 19,613 | 3,007,760 |
| Total | 56,093,194 | 27,377,866 | 547,880 | 84,018,940 |

Projected investment income for this report was 1.64%, based on historical investment yields earned by the State. As a result, as shown in the second chart, above, investment income amounts to approximately 8.7% of undiscounted losses. Improvements in investment yield will increase this amount.

The following table shows the results of our analysis taking into account the effect of investment income:

| Missouri Petroleum Storage Tank Insurance Fund Discounted Unpaid Loss & ALAE as of June 30, 2018 | | | |
|---|--|------------------|--|
| Claim Type | Undiscounted Unpaid Loss & ALAE | Discount | Discounted Unpaid Loss & ALAE |
| Insurance UST – Release | 11,944,635 | 1,032,534 | 10,912,100 |
| Insurance UST – Closure | 15,704,062 | 1,331,170 | 14,372,892 |
| Insurance UST – Other | 15,829,897 | 1,327,386 | 14,502,511 |
| Remedial UST | 23,965,443 | 2,018,303 | 21,947,140 |
| Insurance AST | 13,567,144 | 1,378,006 | 12,189,138 |
| Remedial AST | 3,007,760 | 239,399 | 2,768,360 |
| Total | 84,018,940 | 7,326,799 | 76,692,141 |

Although Remedial UST claims made up the majority of the case reserves, IBNR is concentrated in Insurance UST - Other, indicating greater development on known claims in that coverage. In the future, as remedial claims are closed and future remedial claims decrease in number (proportional to the decreasing number of remedial sites), we expect Remedial UST to decrease as a portion of unpaid loss and LAE compared to other claim types.

As of June 30, 2018, the PSTIF held \$82,893,195 in reserves for claims payable. This is \$1,125,745 deficient when compared with the undiscounted unpaid loss and ALAE, and \$6,201,054 redundant when compared with the discounted unpaid loss and ALAE.

Note that these reserves do not include a provision for claims not yet reported to the PSTIF as of June 30, 2018.

Unallocated Loss Adjustment Expense Reserve

If PSTIF were a commercial insurance company, statutory insurance accounting rules would require that all estimated future costs for claims administration for open claims be held as reserves. T&M has estimated those additional costs for Williams & Company Consulting, Inc. (“Williams”), the PSTIF third-party administrator, to handle all open claims until final settlement at \$14,585,282 on an undiscounted basis and \$13,313,386 on a discounted basis. This amount is not included in the tables above. This amount reflects the extended time horizon over which PSTIF claims are paid. The following chart shows the total liability including unallocated loss adjustment expense:

| Missouri Petroleum Storage Tank Insurance Fund Discounted Unpaid Loss & LAE as of June 30, 2018 | | | |
|--|---------------------------------|------------------|-------------------------------|
| | Undiscounted Reserve | Discount | Discounted Reserve |
| Loss & Allocated Loss Adjustment Expense | 84,018,940 | 7,326,799 | 76,692,141 |
| Unallocated Loss Adjustment Expense | 14,585,282 | 1,271,897 | 13,313,386 |
| Total | 98,604,223 | 8,598,696 | 90,005,527 |

Loss and Loss Adjustment Expense Reserves (Including Unallocated) Needed at Sunset Date

If the sunset date of the PSTIF is not changed by the legislature, the ability for filing new claims will sunset on December 31, 2025. In order to estimate the reserve position of PSTIF as of December 31, 2025, T&M made several assumptions. The first assumption was that there would not be any increase in the rate at which releases are reported as the sunset date approaches, see Exhibits E-16 and E-20.

T&M also assumed that the releases reported from June 30, 2018 through December 31, 2025 will have the same average frequency and severity as the historical data, adjusted for trends in the data. Payment patterns by type of release were applied to the data to produce the needed reserves. The following table summarizes the anticipated reserve required to run off all claims reported as of the anticipated fund sunset date:

| Missouri Petroleum Storage Tank Insurance Fund Unpaid Loss & LAE on December 31, 2025 Assuming No Increase in the Rate of Reported Releases Reserve Study as of June 30, 2018 | | |
|--|---------------------|-------------------|
| | Undiscounted | Discounted |
| Unpaid Claim Expense | 60,572,762 | 55,290,567 |
| Unpaid Allocated Loss Adjustment Expense | 397,582 | 362,911 |
| Unpaid Unallocated Loss Adjustment Expense | 10,584,158 | 9,661,175 |
| Total | 71,554,502 | 65,314,654 |

As discussed above, these unpaid claim amounts do not take into account the possibility of increased claim reporting in the period leading up to the fund sunset, nor do the above reserves include amounts required for overhead expenses such as salaries of fund personnel. Discounted losses are calculated using an investment yield of 1.64% which is consistent with current financial documents prepared by PSTIF.

Reserving Practices

Claims handling and underwriting is provided by Williams under a contract with the PSTIF. The Williams claim staff is headed by David Walters, who brings insurance industry experience to the

claims handling team. Much of the remaining staff has a technical background in engineering or geology and significant experience in handling claims for the PSTIF.

Williams' claim philosophy entails providing a swift response to reports of covered leaks and spills in order to minimize further contamination and the associated increased liability. A swift response also enables the claim department to secure pertinent physical evidence (such as damaged piping, valves, etc.) before it is discarded. Discussions during the preparation of this report indicate that the claims philosophy has not changed, although there has been a concerted effort to decrease the time between the receipt of a claim and its closure.

Claims handling is somewhat different than that of an insurance company in that the PSTIF was created to protect the environment and the citizens of Missouri from the impact of petroleum releases. Therefore, the claims handling effort is focused on reasonable and necessary costs for effective response to the leak or spill. The number of PSTIF lawsuits appears relatively modest when compared to commercial general liability insurers. Those claims involving lawsuits have defense counsel assigned as would be expected.

Claims are handled by having the contractor or the consultant hired by the owner/operator submit a proposed work plan and estimated costs to the PSTIF. The planned costs may be challenged by the claims adjustor to craft a more reasonable response if required. Proposed costs must be deemed "reasonable" to be approved. Once the project is started, invoices are submitted to the PSTIF for reimbursement.

Remedial claims present a unique situation that would not be encountered in a commercial insurance company. Often the site has been abandoned completely or converted to a different use. Remedial

claims generally move forward only when a party is willing to step forward and participate in the remediation process, which usually includes paying the first \$10,000 of cleanup costs.

Adjustors are also charged with establishing appropriate case reserves for the PSTIF. In insurance companies, aggregate incurred values (paid plus case reserves) tend to increase over time as more information regarding claims becomes known. Overall, PSTIF incurred values produce low loss development factors, which indicates that the case incurred values are a reasonable indicator of the ultimate cost of PSTIF claims, particularly for the UST Closure and UST Remedial claims.

When the proposed work plan for the leak or spill site has been completed and all monitoring results are within required limits, the claimant's environmental consultant informs the Missouri DNR that the impact of the leak or spill meets the DNR's remediation standards. Once notified by the claimant's environmental consultant, the DNR will then issue a "No Further Action" ("NFA") letter, meaning the claim is now considered closed. Claims not actively being managed by the owner/operator (i.e., cleanup activities have been abandoned or monitoring is not in place) are placed in suspense. Essentially, this means that the claim is not progressing toward the issuance of an NFA letter by the Missouri DNR. These stalled claims are removed from the suspense list and handled in a normal manner if someone again takes an interest in completing the cleanup at a future date.

Underwriting

Williams also provides underwriting services as part of its TPA function. Underwriting guidelines are established by the PSTIF and Williams to determine the insurability of any given tank. An application for coverage with the PSTIF must be filled out by the tank owner/operator along with a method of securing payment of the \$10,000 deductible. In addition, the tank owners/operators must demonstrate that the tanks and associated piping under their control are not currently leaking.

Coverage attaches on a claims-made basis which means that claims must be reported during the coverage period in order to be covered. Remedial claims are covered as reported without the requirement that coverage was in effect at the time of the release. If the tank system(s) that leaked is/are still in operation, however, coverage must be continuously maintained.

Data required on the application for insurance with PSTIF for UST installations include such items as the installation date, the tank capacity, the type of product contained, type of tank (e.g., single walled, double walled, fiberglass, etc.), type of piping, and details on overfill and leak protection. The PSTIF application for AST's requires similar documentation requirements along with information on the secondary containment system in place.

Applications for coverage with the PSTIF are reviewed by Williams' personnel and deficiencies are noted. Coverage documents are only issued if the application information is found to be satisfactory.

Projection of Future Loss and Loss Adjustment Expense, Claim Severity, and Frequency

T&M was asked to estimate costs for claims to be reported in 2019 and subsequent years, i.e., claims that have not yet been reported to PSTIF. To perform this projection, T&M applied several methodologies to estimate future loss and loss adjustment expenses based on claim frequency and claim severity for each claim category. For purposes of our initial projection of reserves needed as of December 31, 2025, we assumed that claims reporting would proceed as normal with no increase in reporting due to the impending sunset date. This permitted the assumption that claims reporting would proceed as normal. In addition, T&M created scenarios that might represent an expected influx of claims should the program not have its termination date extended.

Projection of Frequency and Severity

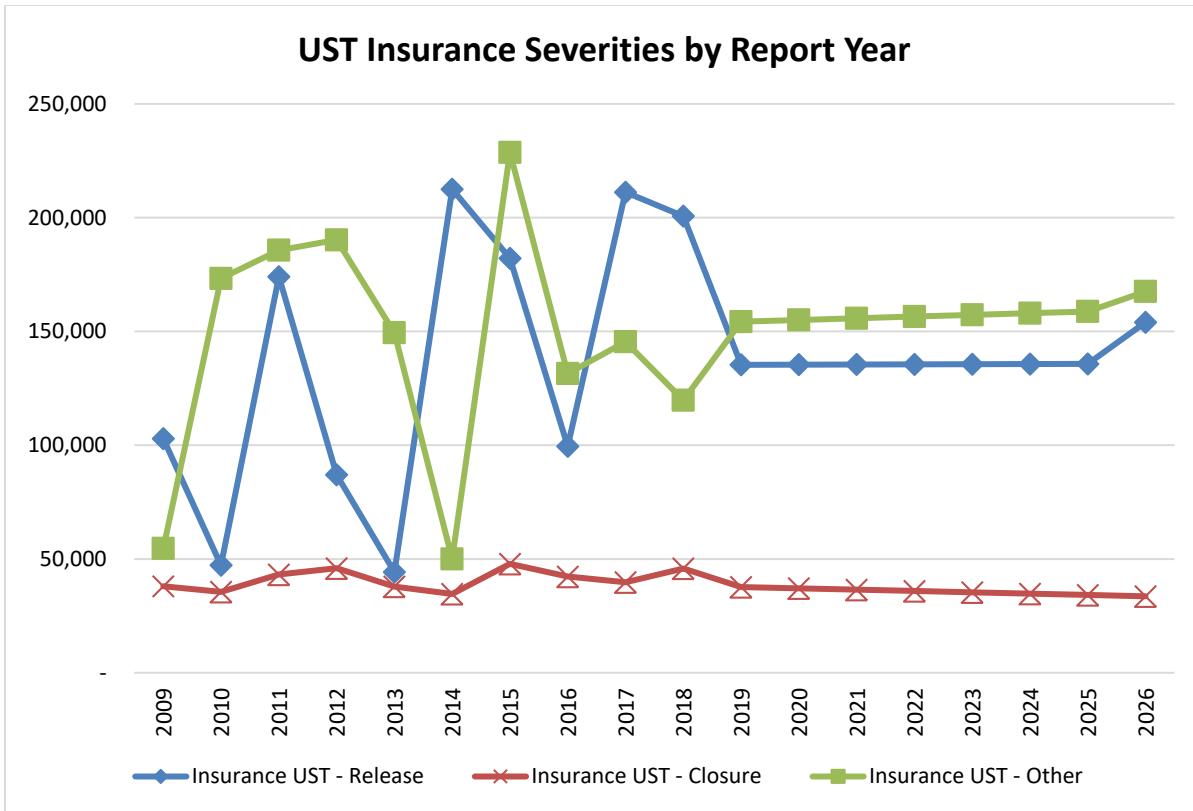
As part of projecting the financial condition of the PSTIF through December 31, 2025, we estimated (1) future claims reporting and (2) future claim severity for each claim category.

To project future reported claims counts, T&M used a variety of regression techniques. The results from those analyses led us to project relatively flat claim count patterns in the future for most claim types and modest declines in claim counts for Insurance UST – Closure and Insurance UST – Other claim types.

Analysis of coverage in-force indicates a modest negative trend in the number of UST tanks with in-force coverage and a positive trend in AST tanks with in-force coverage. In the case of in-force AST coverage, the PSTIF provided a likely maximum penetration of 80% to 85% of the total population of 1,208 sites with ASTs. Our projections suggest that the number of AST tanks with coverage agreements in-force will approach 1,027 (85% of the total population) asymptotically over the next several years.

The current analysis of average claim severities this year suggests that Insurance UST – Release will remain relatively stable around \$135,500 per claim on average. Insurance UST – Other and Insurance AST claims will tend to increase modestly in average severity over time, with increases of 3.0% to 4.5% (respectively) over the next seven years, an average increase of 0.41% to 0.63% per year, respectively. Insurance UST – Closure claims will tend to decline in average severity over time. Remedial claims of all types will tend to stay at about the same average severity level over time.

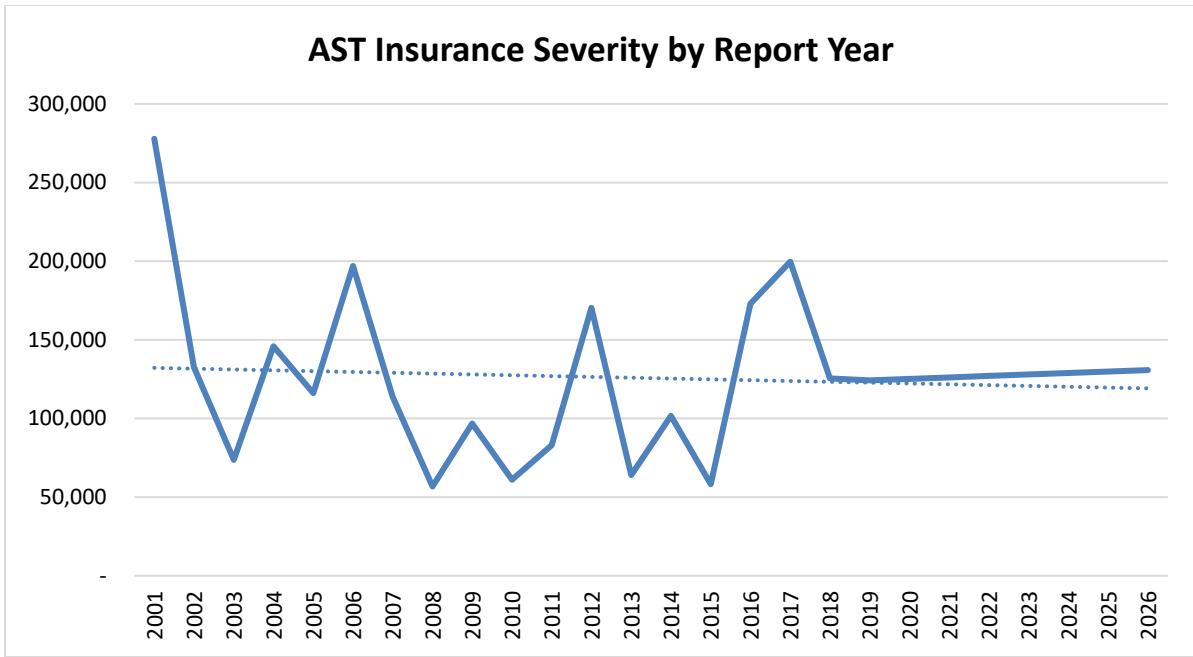
The following four charts show claim severities over time. The first chart displays the Insurance UST claim severities over time from Report Year 2009 to Report Year 2026:



Note that everywhere they are discussed in this report, Report Years are based on the fiscal year in which a claim was opened. A claim that was opened in or after July 2017 will have a Report Year of 2018 to match the fiscal year ending June 30, 2018.

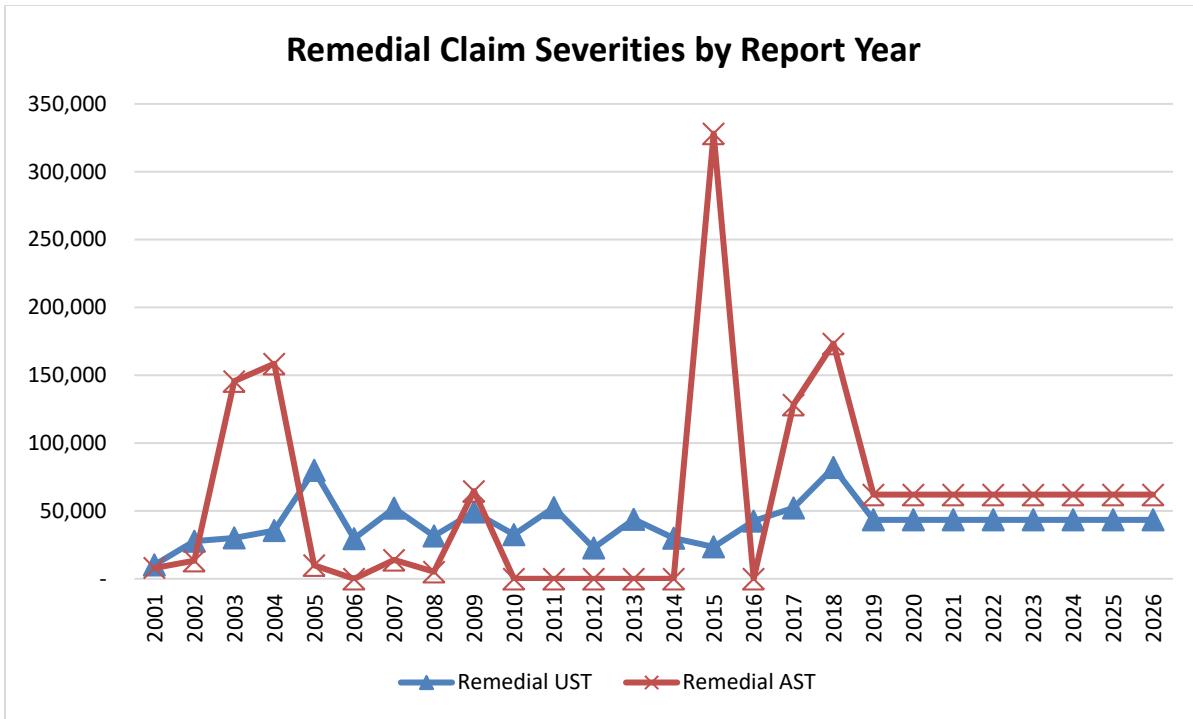
As this graph shows, the average severity for the “Release” and “Other” claim types have generally fluctuated between \$50,000 and \$250,000, while the “Closure” claim type has shown very stable average severity over time. This stability may be attributed to the higher number of “Closure” claims compared to other Insurance UST claim types, which creates lower volatility.

The following chart shows the average claim severity from Report Year 2001 to Report Year 2026 for Insurance AST claims:



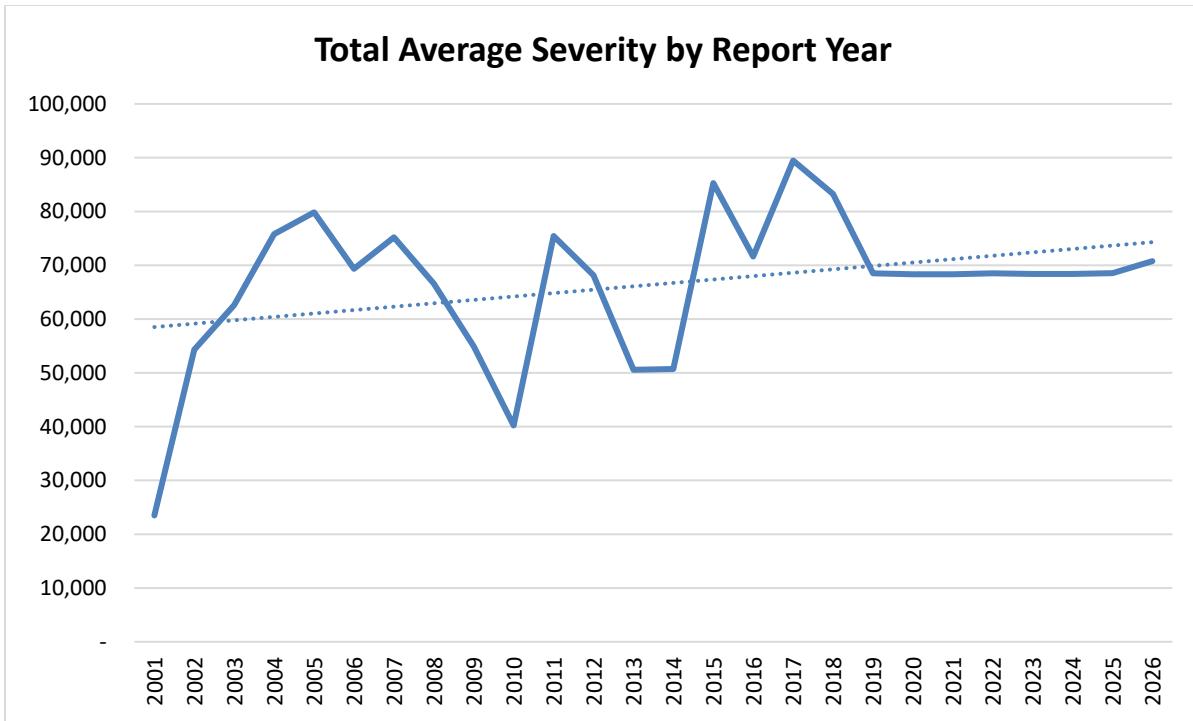
As this chart shows, the average severity of Insurance AST claims has shown significant volatility over time. Given the repeated spikes and troughs in severity since the early 2000s, it is anticipated that severity will continue to fluctuate between \$50,000 and \$200,000, with an average of \$125,000.

Finally, the following chart shows the average severity of Remedial UST and AST claims from Report Year 2001 to Report Year 2026:



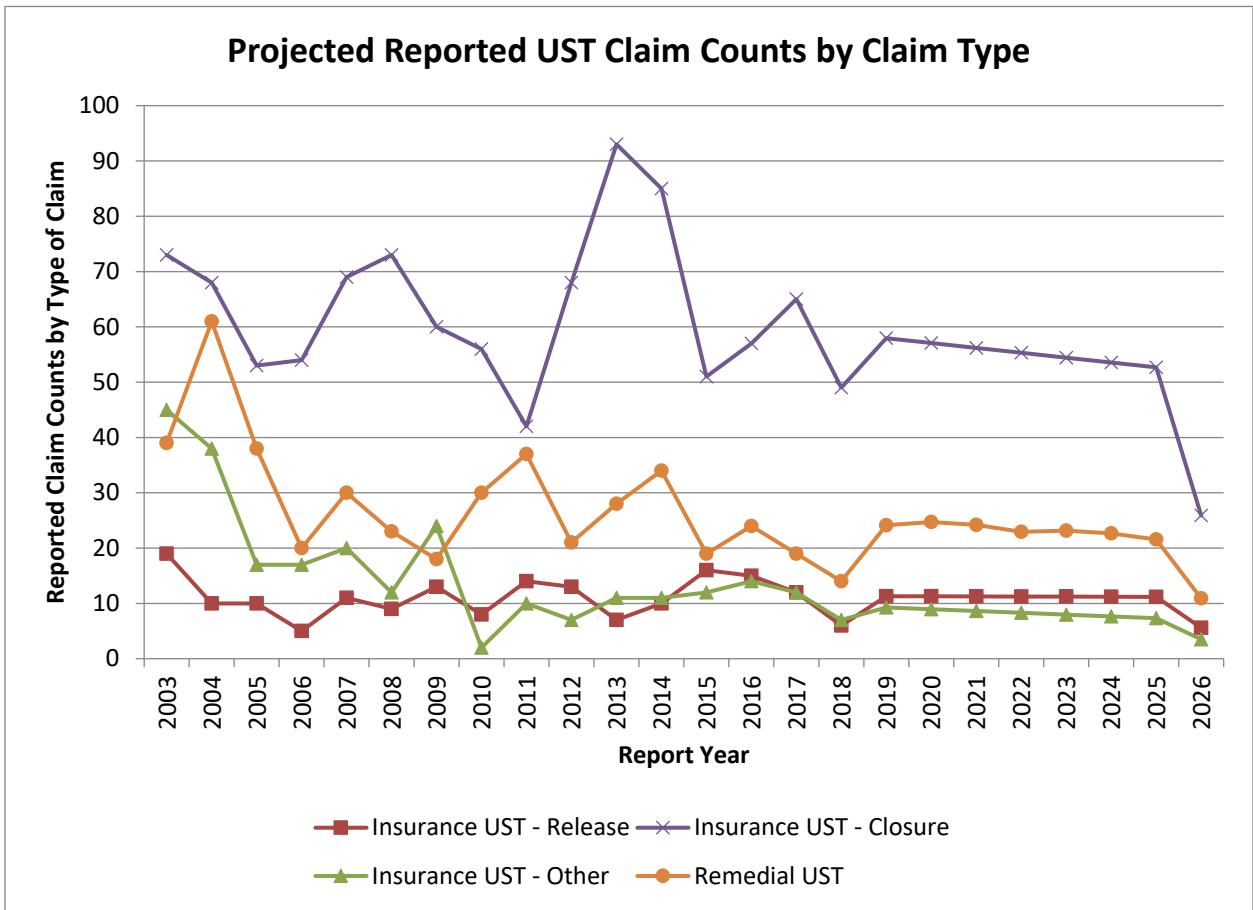
As this chart shows, with the exception of an outlier year in 2015 (caused by a single very large claim), the remedial claim severities have remained relatively stable over time. Projections for future years are consistent with this.

Finally, the following chart shows the combined total average severity over time:



As this graph shows, the overall average severity has increased modestly since the mid-2000s. This appears to be not the result of increasingly severe claims, but rather a result of a changing mix of claim types. As claim types with higher average severities make up a larger percentage of total claims and claim types with lower average severities make up a smaller share, the average severity has drifted upward over time. Future Report Year projections reflect an anticipation of relative stability in future severity.

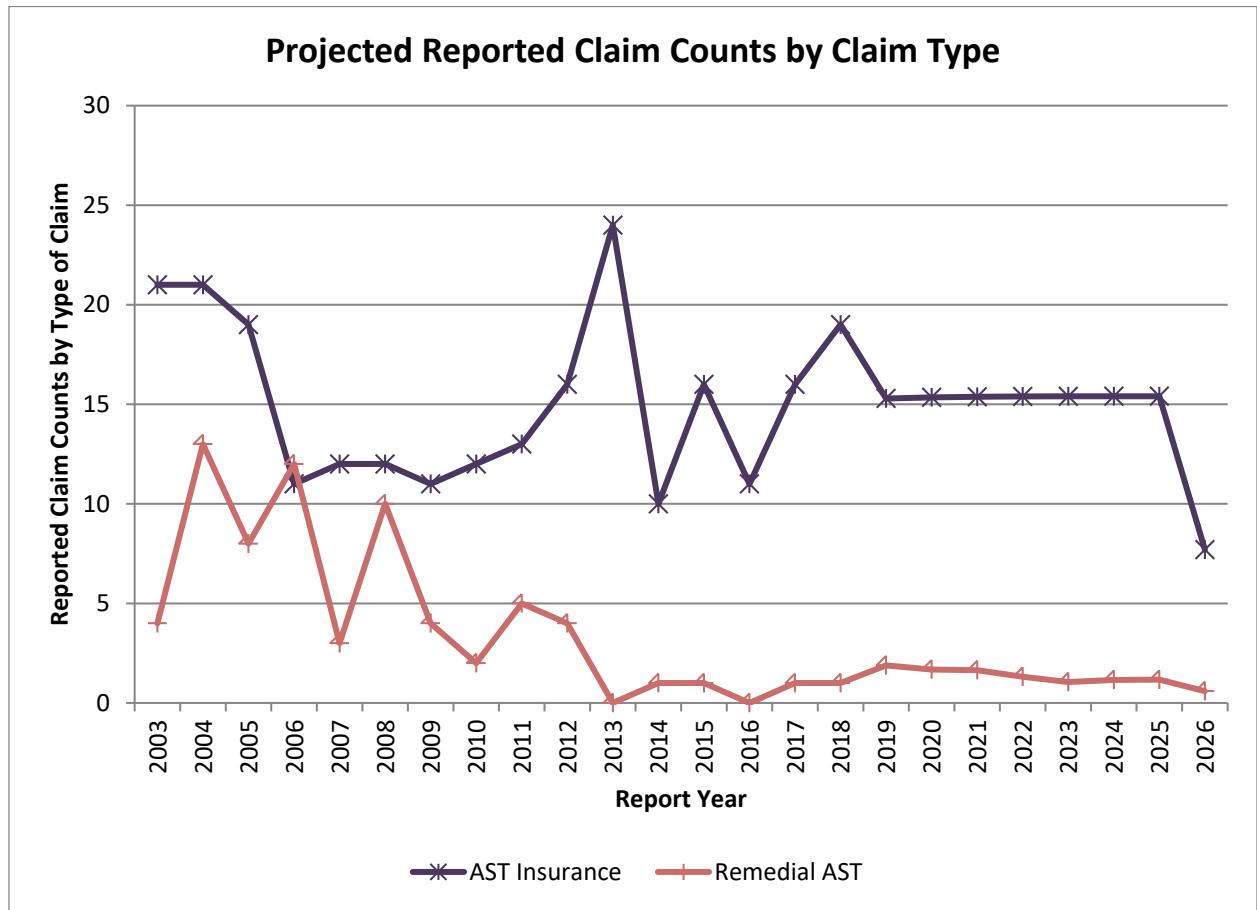
In addition, we performed an analysis of claim frequencies over time. The following chart displays historical and projected claim counts by UST claim type:



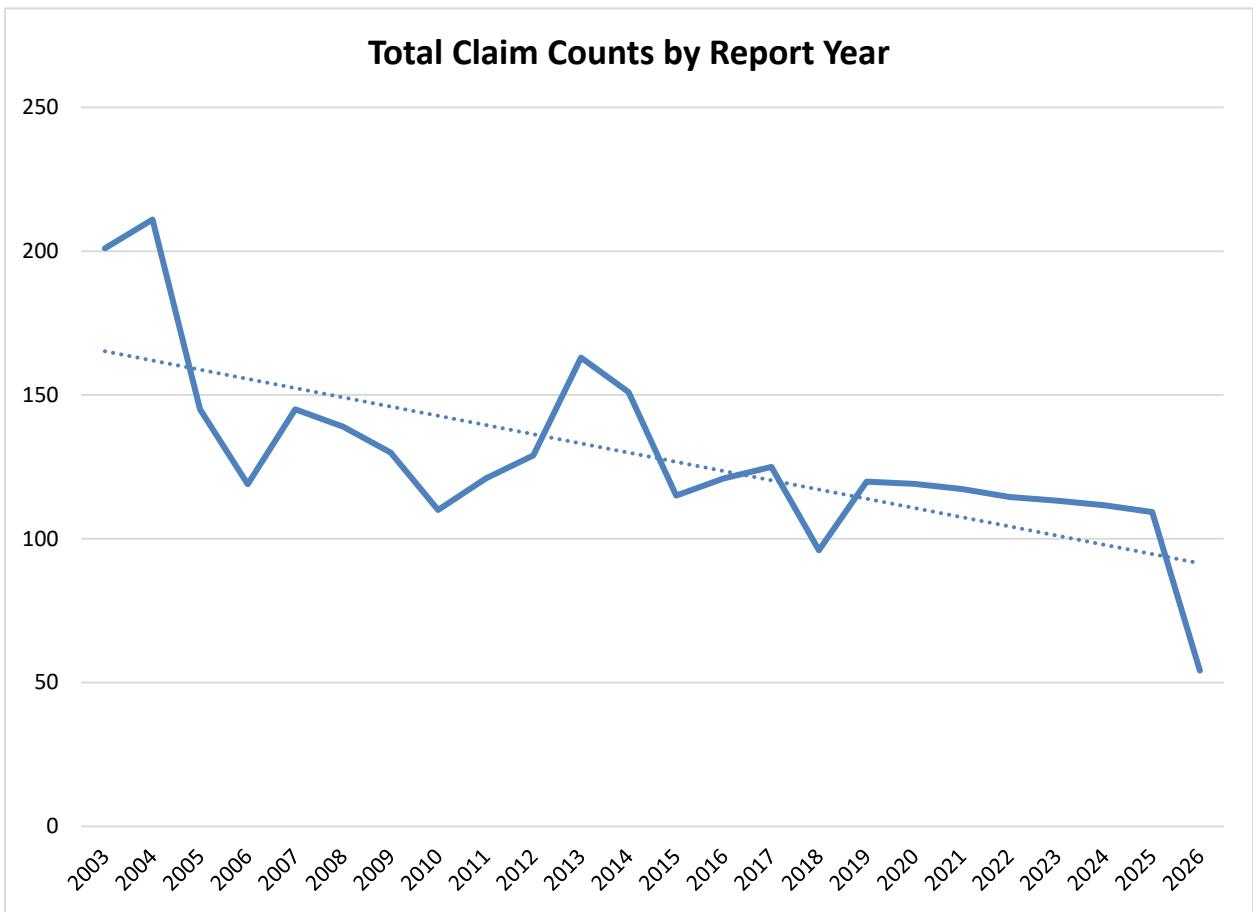
Note that we have excluded the Report Year 2000-2002 years because the remedial claim types have a significant number of claim counts in those years that make the chart unreadable due to the scale. The decrease in Report Year 2026 is due to the fact that claims cannot be reported past the sunset date, which falls half-way through the Report Year.

As this chart shows, the “Insurance UST – Closure” claim type has dominated since 2003, but generally slopes modestly downward over time. The second most common claim type, “Remedial UST,” appears to also be in slow decline. All other claim types appear to have leveled off by 2018, with the exception of some expected annual volatility, and therefore we anticipate that these claims will continue at roughly the same frequency levels in the future.

Similarly, the following chart shows the historical and projected claim counts by AST claim types:



The following chart shows the total claim counts by Report Year:



This chart shows some modest if volatile decline in reported claim counts through 2018. Projected future years continue under the assumption of a modest decline in total claim counts.

Projection of Revenues

The PSTIF has two primary sources of revenue: transport load fees (“TLF”) and participation fees, which is the actual premium charged for the insured risks. Transport load fees are charged to transporters of petroleum on a per load basis. TLF make up the majority of the PSTIF revenues. From 2001 until September 1, 2008, TLF fees were \$40 for 8,000 gallons of petroleum product transported. On September 1, 2008, the TLF fee was reduced to \$20 per 8,000 gallons of petroleum product transported and that charge has remained constant. Enabling legislation grants PSTIF the authority to

raise the TLF should the need arise. The overall maximum TLF is set at \$60 per 8,000 gallons of petroleum product by legislation.

Participation fees are charged to tank owners/operators on the basis of the number and categories of tanks insured. For USTs, the participation fee is \$100 per tank for double-walled tanks, and \$125 per tank for single-walled. For ASTs, the fee is \$100 per tank for tanks with a capacity less than 25,000 gallons and \$200 per tank of 25,000 gallons or more. A “new tank” charge of \$100 per tank is a one-time premium payment in addition to the participation fee for both UST and AST tanks payable during the first year of insurance with PSTIF.

T&M has relied on projections of future revenues provided by the PSTIF. We have reviewed these projected revenues for reasonableness and found they are reasonable based on current economic conditions. However, T&M has not attempted to quantify the potential impact on PSTIF revenue of the move to more fuel-efficient vehicles and to alternative vehicle fuels. In addition, no attempt has been made to quantify the impact of significant changes in fuel prices on the TLF revenue stream.

Projection of Future Cash Flows

T&M was asked to project cash flows to the PSTIF for a five-year time horizon. To perform this analysis, we combined projections of future claim frequencies and severities, projections of future revenues, and projections of future expenses associated with the PSTIF’s third-party administrator.

Future paid losses were simulated based on assumed probability distributions for frequency, severity, and claim payment speeds. Simulated claim payment speeds also affected the payout speeds of unpaid claims from historical Report Years.

The following page shows the projected cash flows from July 1, 2018 through December 31, 2025 assuming no influx of claims due to the sunset of the PSTIF program:

Financial Projections Based on PSTIF 2018 Projections

| (A) Annual Revenues Fiscal Year: | (B) 2019 | (C) 2020 | (D) 2021 | (E) 2022 | (F) 2023 | (G) 2024 | (H) 2025 | (I) 2026 (1/2) | (J) Totals |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------------|---------------|
| (1) Transport load fees | 11,500,000 | 11,450,000 | 11,400,000 | 11,350,000 | 11,300,000 | 11,250,000 | 11,200,000 | 5,575,000 | 85,025,000 |
| (2) 100 Initial tank fees | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 8,500 | 127,500 |
| (3) UST participation fees | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 445,000 | 6,675,000 |
| (4) AST participation fees | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 165,000 | 2,475,000 |
| (5) Interest income | 785,000 | 705,714 | 617,173 | 542,770 | 477,227 | 416,585 | 359,177 | 152,035 | 4,055,681 |
| (6) Total Revenues | 13,522,000 | 13,392,714 | 13,254,173 | 13,129,770 | 13,014,227 | 12,903,585 | 12,796,177 | 6,345,535 | 98,358,181 |
| Administrative Expenses Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (7) Third Party Administrative Expenses | 2,265,000 | 2,219,700 | 2,175,306 | 2,131,800 | 2,089,164 | 2,047,381 | 2,006,433 | 983,152 | 15,917,936 |
| (8) Contingency & Special Projects | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 45,000 | 675,000 |
| (9) Office of Administration | 82,401 | 84,873 | 87,419 | 90,042 | 92,743 | 95,525 | 98,391 | 50,671 | 682,066 |
| (10) Section 319.107 Expenses | 10,000 | 10,300 | 10,609 | 10,927 | 11,255 | 11,593 | 11,941 | 6,149 | 82,774 |
| (11) Underwriting | 555,650 | 572,320 | 589,489 | 607,174 | 625,389 | 644,151 | 663,475 | 341,690 | 4,599,337 |
| (12) Inspections | 342,351 | 352,622 | 363,200 | 374,096 | 385,319 | 396,879 | 408,785 | 210,524 | 2,833,776 |
| (13) Training & Loss Prevention Services | 12,000 | 12,360 | 12,731 | 13,113 | 13,506 | 13,911 | 14,329 | 7,379 | 99,329 |
| (14) Other Professional Expenses | 431,135 | 444,069 | 457,391 | 471,113 | 485,246 | 499,804 | 514,798 | 265,121 | 3,568,676 |
| (15) Legal Expenses | 200,000 | 206,000 | 212,180 | 218,545 | 225,102 | 231,855 | 238,810 | 122,987 | 1,655,480 |
| (16) Department of Revenue | 45,303 | 46,662 | 48,062 | 49,504 | 50,989 | 52,519 | 54,094 | 27,858 | 374,991 |
| (17) Attorney General's Office | 42,918 | 44,206 | 45,532 | 46,898 | 48,305 | 49,754 | 51,246 | 26,392 | 355,249 |
| (18) PSTIF Board/Staff | 290,700 | 299,421 | 308,404 | 317,656 | 327,185 | 337,001 | 347,111 | 178,762 | 2,406,240 |
| (19) Department of Natural Resources | 1,621,657 | 1,670,307 | 1,720,416 | 1,772,028 | 1,825,189 | 1,879,945 | 1,936,343 | 997,217 | 13,423,102 |
| (20) Total Administrative Expenses | 5,989,115 | 6,052,838 | 6,120,739 | 6,192,895 | 6,269,392 | 6,350,316 | 6,435,756 | 3,262,904 | 46,673,956 |
| Claim Payments Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (21) Average / Expected | 13,378,116 | 12,287,121 | 11,255,339 | 10,804,233 | 10,269,262 | 10,026,562 | 9,604,324 | 4,546,594 | 82,171,552 |
| (22) Cash balance @ 6/30/18 | 45,933,353 | | | | | | | | |
| Funds Available at Fiscal Year-End: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | |
| (23) Average / Expected | 40,088,122 | 35,140,876 | 31,018,971 | 27,151,612 | 23,627,186 | 20,153,893 | 16,909,989 | 15,446,026 | |

Notes: Rows (1) through (18) from Financial Projections provided by PSTIF with some minor differences due to rounding.

This chart shows projected revenues, projected expenses, projected claim payments, and projected cash available at year-end. For example, the actuarial central estimate is that \$13.4 million in losses will be paid in fiscal year 2019 in addition to \$6.0 million in administrative expenses. Revenues are expected to total \$13.5 million, leaving a cash balance of \$40.1 million at fiscal year-end 2019. As of December 31, 2025, the actuarial central estimate suggests that there will be a remaining cash balance of approximately \$15.4 million. This balance assumes that the fund will sunset on December 31, 2025 and that there will be no increase in claim reporting as the fund sunset date approaches.

Exhibit E-20 expands on this chart by showing claim payments and the resulting cash balances at various confidence levels. For example, there is a 50% probability that the cash balance as of December 31, 2025 will be greater than or equal to \$16.6 million.

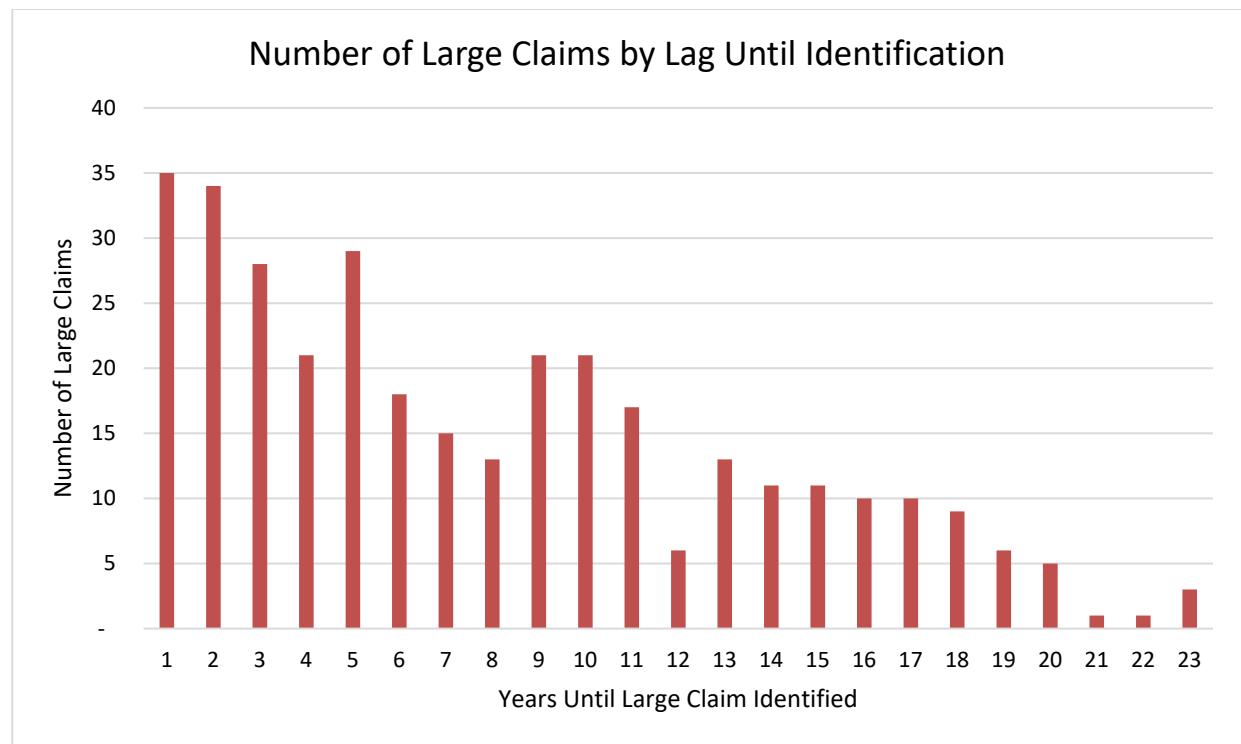
Exhibits E-21 through E-23 show alternative cash flow scenarios based on the possibility that claim reporting will increase if the fund approaches the sunset date. In these cases, we projected increases in remedial, closure, and “other” claims leading to increased claim costs in 2021 and the first half of the 2026 fiscal year (at which time the fund is projected to be sunset). The financial results of these scenarios are also shown graphically in Exhibits E-17 through E-19.

Exhibit E-24 provides the total projected claim payments for future fiscal years assuming no increase in claim activity. The first section of this exhibit displays future anticipated claim payments arising from currently reported claims (i.e., Report Years 2018 and prior). The second section displays claim payments arising from claims that will be reported in the future (Report Years 2019 and after). The third section displays the total of these two amounts.

Large Loss Claims

Large loss claims are defined as claims that meet or exceed the level of \$250,000. T&M performed several analyses of large loss claims. These analyses included (1) calculation of the amount of time after a claim is reported for it be identified as “large,” (2) consideration of factors that increase the likelihood of a claim being a large claim, (3) consideration of reserving practices for large claims, and (4) consideration of the financial impact of large claims.

Using net incurred losses, T&M examined the current set of claims that have been identified as large. On average, these claims passed the \$250,000 incurred threshold between the 7th and 8th years after report. Specifically, the claims were identified as large on average at 95.76 months, which is just before the 8th year (96 months). This represents a slight increase from the previous evaluation in which the average time was 93 months. The following chart shows the number of large claims by the time it took to identify the claims as “large”:



This length of time is not unexpected. Development on storage tank claims is slow as compared with many other insured lines of business. There can be a significant period of gathering more information, remediating, of testing and monitoring sites, of further remediation, of possibly re-opening claims, etc., which can lead to a long time period between the initial report of the claim and a determination of the ultimate liability.

Additionally, it is often the case that reserving is performed based on what is the “most likely” outcome (i.e., the mode of the distribution of potential reserves). As a result of this, initial reserves for any line will tend to resemble the most common claims, with large claims identified only as information allows the adjuster to distinguish less common features of claims that might lead to a large claim.

The following chart shows claims currently identified as large as a percent of total reported claims by Report Year:

Missouri Petroleum Storage Tank Insurance Fund
Large Claims as a Percent of Total Claims by Report Year
As of June 30, 2018

| Report Year | Total Claims | Large Claims | Percent Large |
|--------------|--------------|--------------|---------------|
| 1994 | 71 | 3 | 4.2% |
| 1995 | 70 | 4 | 5.7% |
| 1996 | 1,203 | 79 | 6.6% |
| 1997 | 258 | 19 | 7.4% |
| 1998 | 423 | 28 | 6.6% |
| 1999 | 409 | 27 | 6.6% |
| 2000 | 493 | 36 | 7.3% |
| 2001 | 489 | 21 | 4.3% |
| 2002 | 247 | 12 | 4.9% |
| 2003 | 196 | 12 | 6.1% |
| 2004 | 188 | 16 | 8.5% |
| 2005 | 134 | 10 | 7.5% |
| 2006 | 105 | 7 | 6.7% |
| 2007 | 140 | 10 | 7.1% |
| 2008 | 127 | 9 | 7.1% |
| 2009 | 124 | 3 | 2.4% |
| 2010 | 96 | 2 | 2.1% |
| 2011 | 86 | 6 | 7.0% |
| 2012 | 94 | 5 | 5.3% |
| 2013 | 124 | 5 | 4.0% |
| 2014 | 104 | 7 | 6.7% |
| 2015 | 99 | 5 | 5.1% |
| 2016 | 101 | 5 | 5.0% |
| 2017 | 108 | 6 | 5.6% |
| 2018 | 81 | 1 | 1.2% |
| Total | 5,570 | 338 | 6.1% |

This chart shows that the percentage of large loss claims per year seems to have declined somewhat in recent Report Years. This may be a function of older claims having had more time to develop than newer claims, but it may also reflect the fact that sites with “legacy pollution” are declining in number. Note that this chart does not include incident reports in the total number of claims.

In addition, the following breakdown shows the anticipated large losses and average lag time to identification of the claims as large by claim type:

**Missouri Petroleum Storage Tank Insurance Fund
Large Losses by Claim Type as of June 30, 2018**

| Claim Type | Total Claims | Large Claims | Percent Large | Average Lag |
|--------------------------------|--------------|--------------|---------------|-------------|
| Insurance UST - Release | 287 | 34 | 11.8% | 60 |
| Insurance UST - Closure | 1,594 | 59 | 3.7% | 87 |
| Insurance UST - Other | 572 | 52 | 9.1% | 105 |
| Remedial UST | 2,562 | 131 | 5.1% | 113 |
| Insurance AST | 287 | 49 | 17.1% | 72 |
| Remedial AST | 268 | 13 | 4.9% | 104 |
| Total | 5,570 | 338 | 6.1% | 96 |

The percentages in the above chart do not necessarily reflect the true risk that a claim may become large over time. For instance, Remedial UST claims make up the largest category of large claims but one of the smallest categories by percentage. This may partly be a reflection of the fact that many such sites had already been partly remediated before the PSTIF began issuing payments. As a result, the percentage may underestimate the true riskiness by claim type going forward.

It is anticipated that remediations associated with tank closures (“Insurance UST – Closure”) will continue to show relatively low risk of becoming large claims. Newer sites without legacy pollution and for which leak prevention has always been used will tend to have less catastrophic releases (if any) that went undetected. Therefore, tank closures at such sites are unlikely to lead to discovery of large losses. By contrast, many older sites with legacy pollution issues have already undergone remediation efforts since the PSTIF became active. Therefore, tank closures at those sites may be less likely to result in large losses because the site has already been remediated recently.

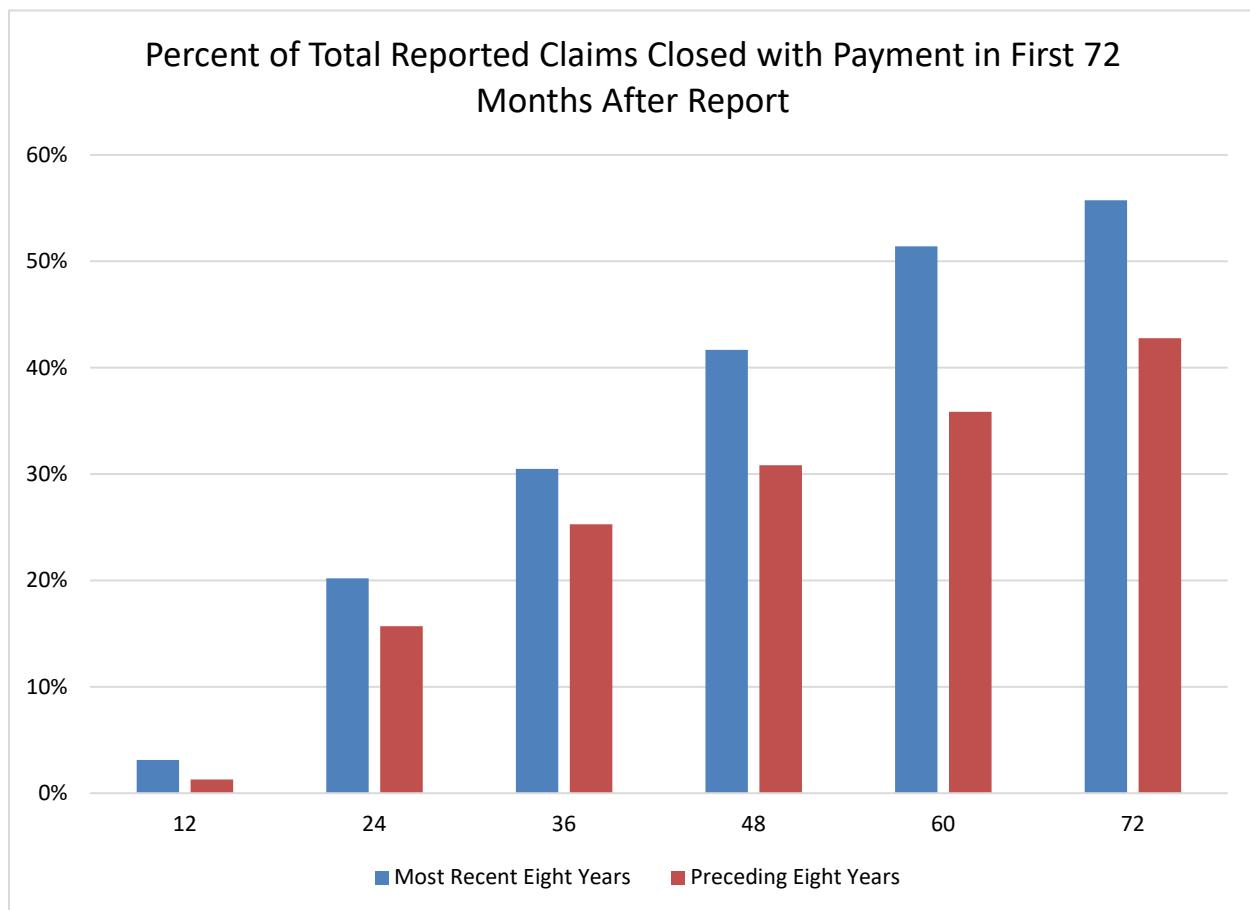
Large losses account for approximately \$159.1 million in incurred losses, or approximately 45.6% of incurred losses, despite accounting for only 6.1% of claims. These values are slightly higher than those determined at the time of the previous analysis.

Settlement Speed

The Board's staff has undertaken significant efforts to improve the speed with which claims come to closure in recent years. However, because such changes are always incremental in nature, it often takes a long time to see them borne out in data.

This year, Taylor & Mulder reviewed the rate at which claims are closed. It is our conclusion that claim closure rates for newly reported claims have generally improved.

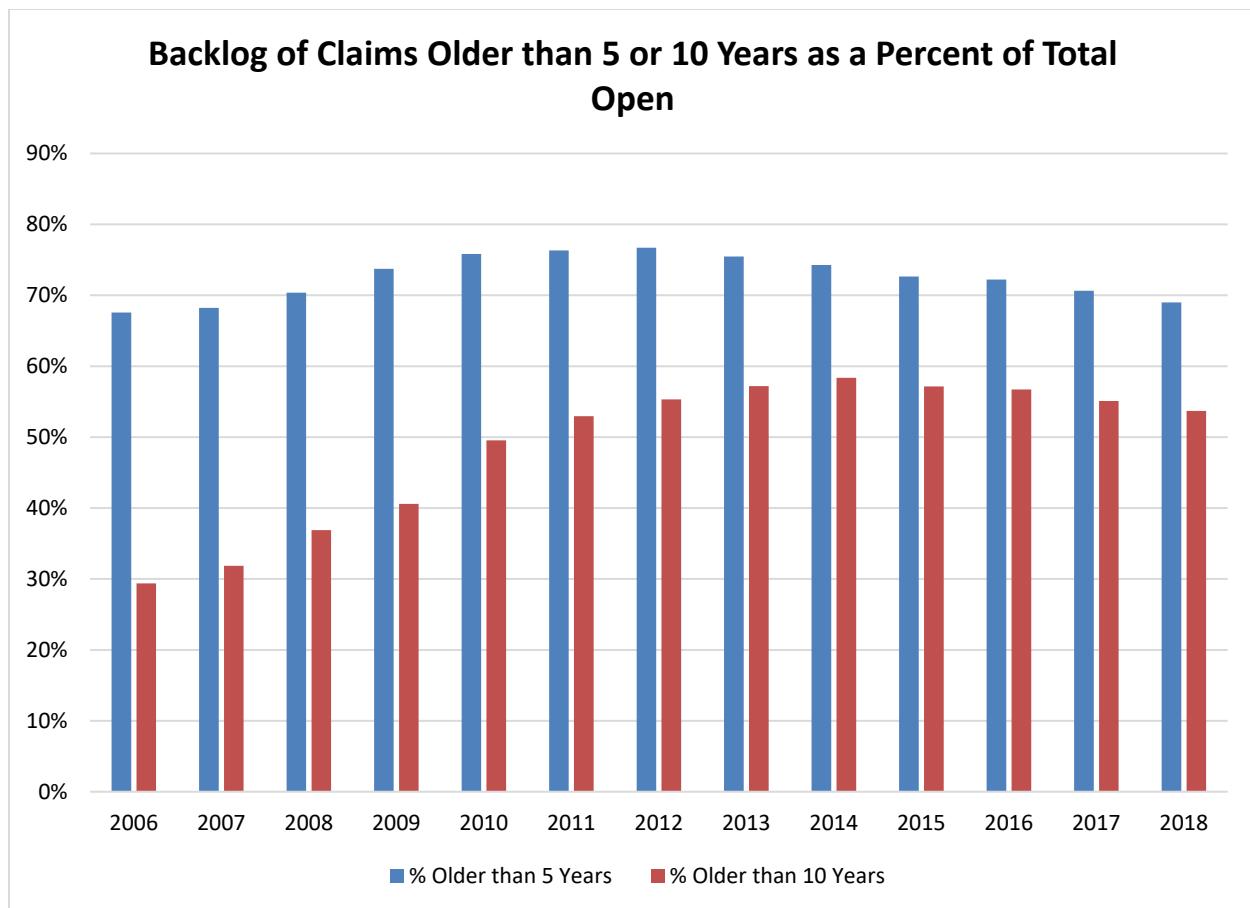
When excluding claims that have been closed without payment, rates of claim closure have been generally higher in the most recent eight years. The following chart shows the percent of claims closed at each maturity for the first 72 months for the most recent eight calendar years (2011 – 2018) and for the preceding eight years (2003 – 2010):



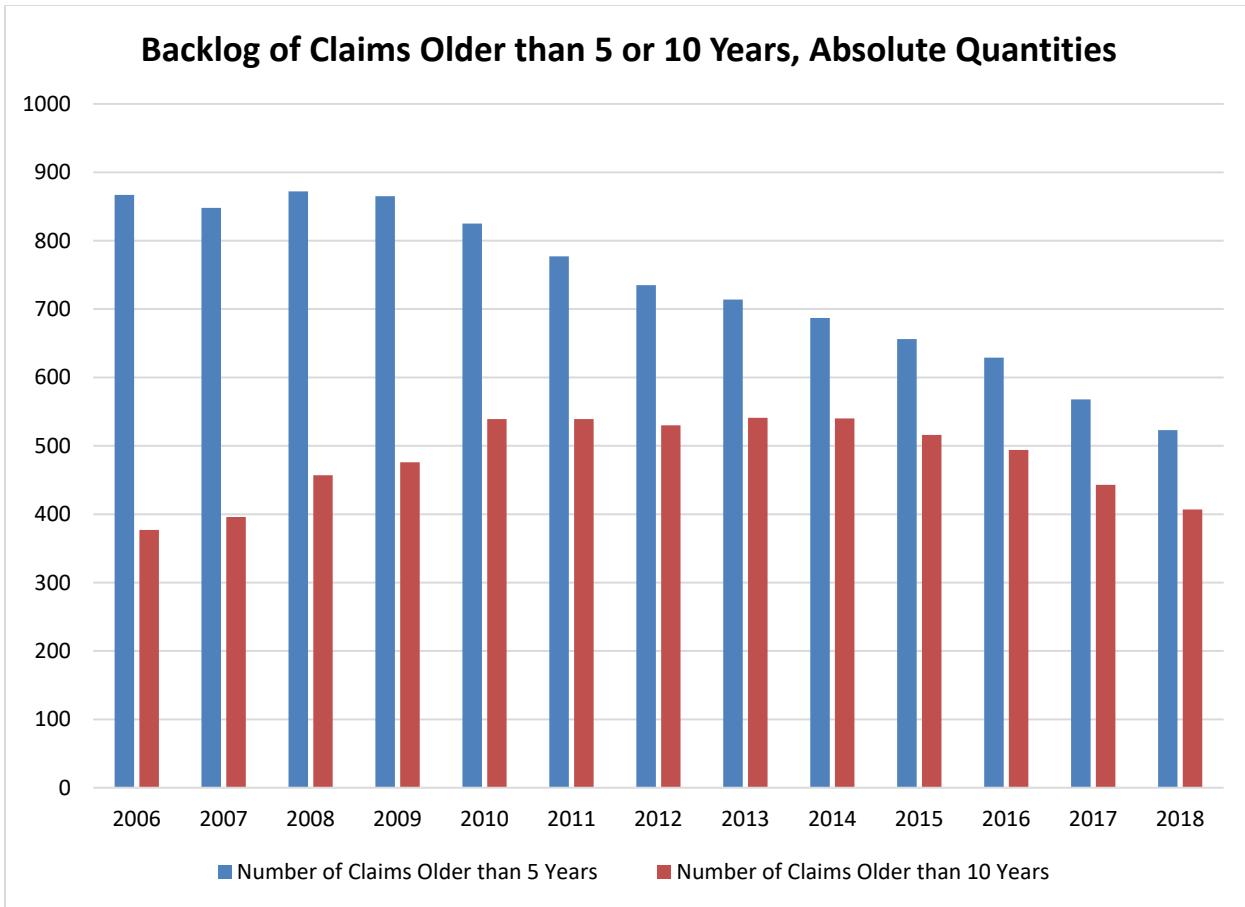
This chart shows that in the most recent eight fiscal years, the percentage of claims closed at each age is significantly higher than for the preceding eight fiscal years.

This pattern is also borne out when looking at all open claims in each fiscal year. In the most recent eight fiscal years, an average 11.8% of open claims have been closed with payment each year. In the preceding eight years, 9.6% of open claims were closed with payment each year on average. These patterns imply that relatively new claims are being closed more quickly now than in the past.

Throughout the early 2000s and into the 2010s, there was a growing backlog of older claims. In recent years, this trend has begun to reverse, with old claims representing a declining proportion of total claims:



This trend is more readily apparent in terms of the absolute number of old claims:



As this graph shows, the absolute number of claims older than 10 years has been declining steadily since 2014, while the number of claims older than 5 years has been declining steadily since 2008.

Recommendations

1. Anticipated Cost of Selling Book

If it is determined that the PSTIF will sunset on December 31, 2025, the remaining open claims will need to be remediated. This will mean incurring overhead expenses of a shrinking book of liabilities over a long period of time at cost to tax payers.

One option for reducing the burden on tax payers would be to sell the book of liabilities to the private market following fund sunset. This would mean paying a private insurance provider a sum of money

in exchange for transferring the responsibility for remediating those claims to the provider. This would effectively extinguish the liabilities for the State of Missouri. Depending on the loss adjustment expenses incurred by the private insurer in handling claims, such an arrangement could lead to remediation of the claims at a decreased cost. It should be noted that there are also potentially significant disadvantages with such a sale that should be weighed heavily before proceeding.

If it is deemed to be potentially in the interest of the State, we would recommend that the PSTIF carry out a study to determine the anticipated costs, advantages, and disadvantages of selling the book of liabilities to the private insurance market following sunset of the fund.

Report Distribution and Use

This report has been prepared for internal use by the management of PSTIF, their accountants, auditors, and attorneys. This report may be reproduced only in its entirety. The Exhibits and Appendices are integral parts of this report. Other distribution or use of this report by the PSTIF management or related parties described above is not authorized without the prior written permission of Taylor & Mulder, Incorporated. The PSTIF is not authorized to include this report in any marketing or request for proposal solicitations. In addition, it should be understood that T&M consultants are available to respond to any questions by authorized third parties with respect to this report.

Conditions and Limitations

The analyses contained in this report were performed using accepted loss and loss adjustment expense reserving methods adjusted to the special needs of the PSTIF and in conformance with sound actuarial standards and principles. T&M introduced assumptions and judgments that we considered appropriate in the circumstances.

With regard to projections of ultimate values, it should be understood that the emergence and settlement of claims are subject to uncertainty. While we have used our best professional judgment in all instances, projections of future ultimate losses and loss expenses are inherently uncertain because of the random nature of claims occurrences. They are also dependent upon future contingent events and are affected by many additional factors.

PSTIF claim reserving procedures and settlement philosophy, current and perceived social and economic inflation, current and future court and jury attitudes, legislative changes affecting the PSTIF, improvements in technology, and many other economic, legal, political, legislative and social factors all can have significant effects on ultimate claim costs. Therefore, we cannot warrant that actual developments will not differ from current projections. Such differences could be upward or downward and could be significant.

In summary, the ultimate loss and loss adjustment expense levels estimated in this report are subject to potential variations in estimation due to:

- (1) the fact that the ultimate liability of PSTIF is subject to the outcome of events yet to occur;
- (2) the unanticipated changes in the legal, economic, legislative or claims adjudication environments;
- (3) statistical fluctuation in losses around the estimated or expected values when all other factors remain constant; and
- (4) the fact that the actual future loss and loss payment and reporting patterns may differ from those applied in the determination of the expected losses or there may be unanticipated changes in the loss and expense loss and expense payment and reporting patterns;

Accordingly, no assurance can be given that future loss emergence will not deviate from the estimated ultimate loss and loss adjustment expenses. However, the ultimate loss and loss adjustment expense

estimates were based on a reasonable application of generally accepted actuarial procedures and techniques applied to the information available.

We reviewed the information for overall reasonableness and presented any irregularities to the PSTIF third-party administrator for edification and clarification.

T&M relied without audit or verification on historical loss, loss adjustment expense, exposure data, and other information provided by the PSTIF and its employees. T&M has relied upon the data provided and on the oral and/or written statements made regarding the quality, accuracy, and completeness of the data and information supplied. Any inaccuracies or inconsistencies in the data could have a significant effect on the conclusions drawn.

Should any inaccuracies be found in the data, T&M should be notified immediately so that the analysis can be adjusted accordingly.

With regard to projections of estimated revenues, it should be understood that the revenue streams are subject to uncertainty. While we have used our best professional judgment in all instances, projections of future revenues are inherently uncertain due to potential changes in technology, the implementation of environmental requirements, the introduction of alternative vehicle fuels, and changes in the economy among others. While T&M has used its best judgment in selecting trend values for each category of revenue, actual revenue collected is dependent upon unknown future events and may be affected by additional factors outside of PSTIF control.

T&M reflected anticipated investment income in the reserves assuming a 0.67% annual rate of return on investments. We did not independently verify the ability of the PSTIF to match this assumed rate.

The analysis in this report was limited to the loss and loss adjustment expense items noted in the scope of this project. This report does not include an examination of the assets of the PSTIF, nor did we form any opinion as to the value or validity of the assets. This report does not include a review or analysis of any income statement or other balance sheet items. This analysis with respect to loss and loss adjustment expense reserves is based upon the assumption that all reserves are backed by valid assets and that these assets reflect suitably scheduled maturities and/or sufficient liquidity to meet cash flow requirements.

This report is limited in scope to the estimate of the level of reserve adequacy at the evaluation date of the report. It also includes projections regarding cash flow of the operations of the PSTIF under certain narrow assumptions and conditions.

This report was prepared for use by persons technically competent in insurance financial matters. Persons receiving this report should be made aware of the availability of T&M, Inc. personnel to answer questions and/or amplify on any matter addressed therein.

Actuarial Analysis

Sources of Data

Data was provided by Ms. Carol Eighmey with the PSTIF and Ms. Dorcee Lauen with Williams & Company Consulting, Inc., PSTIF's third-party administrator, in the form of several files. A full description of the names and contents of these files may be found as an appendix at the end of this report. In addition, we received additional information from interviews with PSTIF management and Williams' personnel, as well as from the PSTIF website, www.pstif.org.

Overall Methodology

Selection of Factors

In each of the methods described below, our selections of development factors were based on the evaluation of the predictive value of the various historical averages and the perceived presence or absence of trends and singularities. Apparent statistical aberrations were eliminated either judgmentally or by selecting a longer experience period to increase the credibility of the experience, whichever we believed more appropriate in the particular circumstances.

Paid Development Method

The paid development method uses historical loss payment patterns to project actual payments as of a given valuation date to ultimate. The PSTIF's historical payment patterns or the fitted loss development factors were relied upon in selecting the expected payment patterns at each evaluation. The difference between the projected ultimate losses and the losses and allocated loss adjustment expenses paid through the evaluation date is the estimated reserve as of the evaluation date.

Estimates produced using the paid development method are not affected by changes in the case reserve position of the PSTIF which might have occurred during the review period, but may be understated since they ignore large unpaid claims. Also, this method may be susceptible to any changes in case settlement philosophy and/or speed of payment.

Incurred Development Method

The incurred, or reported, development method is similar to the paid development method and uses historical reporting patterns to project actual reported amounts (excluding IBNR) as of a given evaluation date to ultimate. The difference between the projected ultimate losses and the losses paid through the evaluation date is the estimated reserve as of the evaluation date.

In many situations, the incurred development method is preferred over the paid method since large open but unpaid claims are considered. This method is more responsive to changes in the external business environment, since changes in liability laws, legislative changes affecting the PSTIF, court decisions and other external factors are generally reflected in the case reserves as soon as claims management becomes aware of them. As a result, the incurred loss development factors at each stage of development tend to be lower, and more stable, than those of the corresponding paid development method. However, the incurred development method may be affected by changes in case reserving practices over time and, to a lesser extent, also may be affected by changes in claims settlement rates.

Bornhuetter-Ferguson Methods

Loss development methods may be affected by changes in the reporting and payment of claims. Random fluctuations in the reporting and payment of claims (such as may result from a single unusually large claim) are magnified by the development factors, potentially resulting in biased estimates and wide changes in the estimates from one evaluation to the next. To minimize such

fluctuations, we applied the Bornhuetter-Ferguson method to incurred losses and to paid losses. The Bornhuetter-Ferguson method is particularly suited for projecting loss reserves for longer-tailed business with volatile or limited development patterns. The Bornhuetter-Ferguson method represents a compromise between traditional loss development methods such as the incurred and paid loss development methods and an expected loss ratio method.

For the incurred Bornhuetter-Ferguson method, initial expected losses are established for each accident year to be consistent with projected pure premium amounts, i.e. projected losses divided by an exposure base (in this case, insured tanks in-force for insurance claims or remaining potential remediation sites for remedial claims). These initial expected losses are then split into two components: expected reported losses and expected unreported losses. The expected unreported losses, which comprise the IBNR and bulk reserves for each accident year, are calculated as a function of the earned premium, the initial expected loss ratio, and the expected portion of ultimate losses that remains unreported or unreserved as of the evaluation date.

For the paid Bornhuetter-Ferguson method, initial expected losses are also derived from projected pure premium amounts. These initial expected losses are then split into two components: expected paid losses and expected unpaid losses. The expected unpaid losses, which comprise the IBNR and case reserves for each accident year, are calculated as a function of the initial expected loss ratio, the initial expected ultimate losses, and the expected portion of ultimate losses that remains unpaid as of the evaluation date.

Projection Methodologies for Cash Flow Analysis

Several overlapping projection methodologies were used to perform the cash flow analysis. First, regression techniques were used to project claim frequency and severity into future periods. These projections were then converted into parameters for a simulation model.

The simulation model used a Poisson distribution to predict the number of claims of each category for each Report Year. For each predicted claim, a lognormal distribution was then generated as the prediction of the ultimate size of that claim. For example, one trial of the simulation might predict that there would be 10 UST Insurance (Release) claims in a given Report Year. Each of those 10 claims would have a simulated claim size drawn from the lognormal distribution.

Repeating this process 10,000 times for each claim type and for each Report Year from 2018 to 2026, we obtained a set of potential ultimate losses that represent a probability distribution of outcomes, where more common answers represent more likely outcomes.

Historical losses were simulated using incurred loss development triangles. For each triangle, the loss development factors were simulated using normal distributions for each development period. The mean for each development period was selected to be the actuarial central estimate, while the standard deviation was selected to be the standard deviation of the historical LDFs.

For both historical and future claims, anticipated future payments by fiscal year were determined by applying fixed projected payment patterns to unpaid losses to determine the anticipated timing of future payments.

Combining these projections, we obtained an estimate of the range of possibilities for loss payments over time. We compared these loss payment projections to revenue projections to obtain an estimate of the range of possible outcomes for cash flows over time.

Methodology by Claim Type

Long-tailed lines of business have some important properties. These are lines of business for which claim payments can extend over a very long period (10 years or more) before closure. As claim payments are made over a long time horizon, the first few years after a claim is reported may have little or no actual claim payments. This produces relatively low paid losses at early maturities, and as a result, payment patterns can be strongly affected by small random fluctuations in payments from year to year.

The long payment pattern has a substantial effect on most categories of PSTIF claims. Paid losses at early maturities have shown extreme volatility, and as a result, paid losses have very low credibility (i.e., statistical stability) for some categories of claims.

By contrast, incurred losses have shown greater stability. When a claim is reported to the PSTIF, a reserve is established based on the expected ultimate loss for the claim. As the claim matures and losses are paid out, the incurred loss may be increased or decreased commensurate with the adjuster's interpretation of the ultimate value of the claim. In this case, the first estimate by the adjusters is close enough to the ultimate loss that development is low when compared to paid losses. Because development patterns for incurred losses were more stable over time, incurred loss development methods received greater relative weight in our analysis.

Incurred loss development, by contrast, is stable. Incurred losses do not undergo the same extreme changes as paid losses, making estimates from incurred losses more credible. In some cases, incurred loss

development is modestly negative, implying that early reserve estimates are slightly over-stated. However, these trends seem to reverse at later maturities, returning incurred losses on average to slightly higher than the initial reserves as of 12 months.

When relatively little credibility could be placed in the loss development patterns observed in paid or incurred losses, higher reliance was placed on the Bornhuetter-Ferguson methods. These methods produce estimates that are not as significantly influenced by random variations in claim payout or reporting speeds, but are highly stable from year to year and are a reflection of the overall level of exposure.

Selections of Ultimate Losses

Generally, the selection of ultimate losses was based on selecting incurred loss development method for older years, as this method seemed to give the best result. In years where there was great variability, particularly more recent Report Years, we selected a combination of methods (including the Bornhuetter-Ferguson method) to provide greater stability in results.

Any exceptions to the above description were based on our review of the methods combined with our knowledge of specific accident years and other considerations as described in the background section of our report.

Loss Reserve Discounting

T&M reflected anticipated investment income on reserves using an assumed discount rate of 1.64%. This rate was based on historical yields by the State as of June 30, 2018. We did not independently verify the ability of the PSTIF to match these rates at June 30, 2018.

The undiscounted reserves and the discounted reserves are shown in the summary section of our report. The future payout of the undiscounted recommended reserve from 2019 to 2027 separately and for years subsequent to fiscal year 2027 on a combined basis is also provided in this section.

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

All Claim Types

Executive Summary - Unpaid Losses & ALAE

| Claim Type | Case <u>Reserve</u> | IBNR | Unpaid <u>ALAE</u> | Undiscounted | | Discounted <u>Unpaid</u> <u>Loss & ALAE</u> |
|-------------------------|------------------------|-------------------|-----------------------|------------------------|----------------------------------|---|
| | | | | Unpaid | Unpaid <u>Loss & ALAE</u> | |
| | | | | <u>Loss & ALAE</u> | <u>Discount</u> | |
| Insurance UST - Release | 6,665,892 | 5,200,853 | 77,890 | 11,944,635 | 1,032,534 | 10,912,100 |
| Insurance UST - Closure | 10,796,300 | 4,805,357 | 102,405 | 15,704,062 | 1,331,170 | 14,372,892 |
| Insurance UST - Other | 6,608,138 | 9,118,534 | 103,225 | 15,829,897 | 1,327,386 | 14,502,511 |
| Remedial UST | 19,415,970 | 4,393,197 | 156,277 | 23,965,443 | 2,018,303 | 21,947,140 |
| Insurance AST | 10,296,657 | 3,182,016 | 88,470 | 13,567,144 | 1,378,006 | 12,189,138 |
| Remedial AST | 2,310,237 | 677,910 | 19,613 | 3,007,760 | 239,399 | 2,768,360 |
| Total | 56,093,194 | 27,377,866 | 547,880 | 84,018,940 | 7,326,799 | 76,692,141 |

Notes:

Col (5) = (2) + (3) + (4)

Col (7) = (5) - (6)

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 All Claim Types
 Summary of Ultimate Losses

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) PAID BF <u>ULTIMATE</u> | (5) INC BF <u>ULTIMATE</u> | (6) SELECTED <u>ULTIMATE</u> |
|--------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| 1994 | 4,163,102 | 4,160,404 | - | - | 4,160,404 |
| 1995 | 4,335,032 | 4,239,252 | - | - | 4,239,252 |
| 1996 | 75,352,560 | 75,770,566 | - | - | 75,770,566 |
| 1997 | 19,472,810 | 19,132,155 | - | - | 19,132,155 |
| 1998 | 29,828,357 | 30,064,675 | - | - | 30,064,675 |
| 1999 | 25,367,291 | 24,884,392 | - | - | 25,009,641 |
| 2000 | 33,484,020 | 33,675,402 | - | - | 33,469,166 |
| 2001 | 16,222,819 | 16,300,995 | - | - | 16,300,995 |
| 2002 | 15,948,498 | 16,128,021 | - | - | 16,128,021 |
| 2003 | 12,334,598 | 12,537,636 | - | - | 12,578,354 |
| 2004 | 16,045,459 | 15,787,090 | - | - | 15,993,088 |
| 2005 | 11,526,892 | 11,680,003 | - | - | 11,576,575 |
| 2006 | 8,169,477 | 8,238,733 | - | - | 8,251,423 |
| 2007 | 11,395,779 | 10,716,946 | - | - | 10,903,702 |
| 2008 | 9,796,092 | 9,551,486 | 9,409,801 | 9,350,404 | 9,259,060 |
| 2009 | 7,558,968 | 7,036,582 | 7,674,241 | 7,264,321 | 7,136,497 |
| 2010 | 4,311,342 | 4,488,007 | 5,835,775 | 5,291,335 | 4,424,114 |
| 2011 | 9,518,415 | 9,774,258 | 9,205,405 | 9,577,042 | 9,127,697 |
| 2012 | 9,120,396 | 9,140,527 | 9,455,067 | 9,448,384 | 8,789,291 |
| 2013 | 9,195,617 | 8,347,207 | 9,576,330 | 8,913,217 | 8,241,239 |
| 2014 | 7,815,879 | 8,281,940 | 8,841,533 | 8,979,961 | 7,657,218 |
| 2015 | 12,074,087 | 11,383,554 | 10,850,025 | 10,291,908 | 9,806,359 |
| 2016 | 8,440,995 | 9,194,444 | 9,538,479 | 9,515,728 | 8,667,342 |
| 2017 | 12,245,321 | 12,719,379 | 10,751,784 | 11,998,766 | 11,182,955 |
| 2018 | 7,108,271 | 8,272,270 | 10,282,951 | 9,980,706 | 7,993,546 |
| TOTAL | 380,832,077 | 381,505,924 | 101,421,392 | 100,611,773 | 375,863,334 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

All Claim Types

Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS | (8) PAID ALAE | (9) UNPAID ALAE | (10) ULTIMATE ALAE | (11) ULTIMATE LOSS & ALAE | (12) UNPAID LOSS & ALAE |
|-----------|-----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|---------------------|-----------------------|--------------------------|---------------------------------|-------------------------------|
| 1994 | 4,160,404 | 3,840,951 | 4,145,291 | 304,340 | 15,113 | 319,453 | 6,407 | 2,097 | 8,504 | 4,168,908 | 321,550 |
| 1995 | 4,239,252 | 4,157,462 | 4,210,487 | 53,025 | 28,766 | 81,791 | 9,365 | 537 | 9,902 | 4,249,154 | 82,327 |
| 1996 | 75,770,566 | 68,084,197 | 75,063,252 | 6,979,055 | 707,314 | 7,686,369 | 129,990 | 50,451 | 180,441 | 75,951,008 | 7,736,820 |
| 1997 | 19,132,155 | 18,082,067 | 19,005,008 | 922,940 | 127,147 | 1,050,088 | 42,182 | 6,892 | 49,075 | 19,181,230 | 1,056,980 |
| 1998 | 30,064,675 | 26,735,480 | 29,800,864 | 3,065,383 | 263,811 | 3,329,195 | 82,848 | 21,852 | 104,700 | 30,169,375 | 3,351,047 |
| 1999 | 25,009,641 | 23,225,460 | 24,699,219 | 1,473,758 | 310,423 | 1,784,181 | 75,330 | 11,711 | 87,041 | 25,096,682 | 1,795,892 |
| 2000 | 33,469,166 | 28,362,415 | 33,273,137 | 4,910,722 | 196,029 | 5,106,751 | 84,218 | 33,519 | 117,737 | 33,586,903 | 5,140,270 |
| 2001 | 16,300,995 | 13,112,484 | 16,154,987 | 3,042,503 | 146,008 | 3,188,511 | 52,749 | 20,928 | 73,677 | 16,374,672 | 3,209,440 |
| 2002 | 16,128,021 | 13,376,817 | 15,531,007 | 2,154,190 | 597,014 | 2,751,204 | 47,655 | 18,058 | 65,713 | 16,193,734 | 2,769,262 |
| 2003 | 12,578,354 | 10,229,919 | 11,995,739 | 1,765,819 | 582,616 | 2,348,435 | 54,630 | 15,414 | 70,045 | 12,648,399 | 2,363,849 |
| 2004 | 15,993,088 | 13,177,394 | 14,728,992 | 1,551,598 | 1,264,097 | 2,815,695 | 136,523 | 18,481 | 155,004 | 16,148,093 | 2,834,176 |
| 2005 | 11,576,575 | 8,915,837 | 10,825,449 | 1,909,612 | 751,126 | 2,660,738 | 108,280 | 17,464 | 125,744 | 11,702,320 | 2,678,203 |
| 2006 | 8,251,423 | 6,204,347 | 7,468,420 | 1,264,072 | 783,003 | 2,047,076 | 62,866 | 13,436 | 76,303 | 8,327,726 | 2,060,512 |
| 2007 | 10,903,702 | 8,801,198 | 9,648,495 | 847,297 | 1,255,207 | 2,102,504 | 97,508 | 13,800 | 111,308 | 11,015,010 | 2,116,304 |
| 2008 | 9,259,060 | 7,161,589 | 8,338,369 | 1,176,780 | 920,691 | 2,097,471 | 38,915 | 13,767 | 52,682 | 9,311,742 | 2,111,238 |
| 2009 | 7,136,497 | 5,060,502 | 6,136,229 | 1,075,727 | 1,000,268 | 2,075,995 | 29,082 | 13,626 | 42,708 | 7,179,205 | 2,089,621 |
| 2010 | 4,424,114 | 2,829,476 | 3,979,800 | 1,150,325 | 444,313 | 1,594,638 | 27,591 | 10,467 | 38,058 | 4,462,171 | 1,605,105 |
| 2011 | 9,127,697 | 5,679,153 | 7,877,099 | 2,197,946 | 1,250,597 | 3,448,544 | 30,898 | 22,635 | 53,534 | 9,181,230 | 3,471,179 |
| 2012 | 8,789,291 | 5,411,516 | 7,504,463 | 2,092,946 | 1,284,828 | 3,377,774 | 31,513 | 22,171 | 53,684 | 8,842,975 | 3,399,945 |
| 2013 | 8,241,239 | 5,023,032 | 6,619,698 | 1,596,666 | 1,621,540 | 3,218,207 | 27,062 | 21,123 | 48,186 | 8,289,424 | 3,239,330 |
| 2014 | 7,657,218 | 3,660,548 | 6,304,334 | 2,643,786 | 1,352,884 | 3,996,671 | 24,530 | 26,233 | 50,763 | 7,707,981 | 4,022,904 |
| 2015 | 9,806,359 | 4,973,053 | 7,177,048 | 2,203,996 | 2,629,310 | 4,833,306 | 40,547 | 31,724 | 72,272 | 9,878,631 | 4,865,030 |
| 2016 | 8,667,342 | 2,867,384 | 6,043,788 | 3,176,403 | 2,623,554 | 5,799,957 | 17,550 | 38,069 | 55,619 | 8,722,960 | 5,838,027 |
| 2017 | 11,182,955 | 2,939,088 | 8,012,948 | 5,073,860 | 3,170,007 | 8,243,867 | 23,550 | 54,110 | 77,660 | 11,260,615 | 8,297,978 |
| 2018 | 7,993,546 | 480,906 | 3,941,348 | 3,460,441 | 4,052,198 | 7,512,639 | 11,259 | 49,311 | 60,570 | 8,054,116 | 7,561,950 |
| TOTAL | 375,863,334 | 292,392,274 | 348,485,468 | 56,093,194 | 27,377,866 | 83,471,060 | 1,293,047 | 547,880 | 1,840,928 | 377,704,262 | 84,018,940 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Release
 Summary of Ultimate Losses

| (1) <u>RY</u> | (2) <u>PAID LDM</u> <u>ULTIMATE</u> | (3) <u>INC LDM</u> <u>ULTIMATE</u> | (4) <u>PAID BF</u> <u>ULTIMATE</u> | (5) <u>INC BF</u> <u>ULTIMATE</u> | (6) <u>SELECTED</u> <u>ULTIMATE</u> |
|------------------|---|--|--|---|---|
| 1994 | 246,661 | 246,661 | - | - | 246,661 |
| 1995 | 241,953 | 241,953 | - | - | 241,953 |
| 1996 | 1,579,163 | 1,579,163 | - | - | 1,579,163 |
| 1997 | 1,995,927 | 1,995,927 | - | - | 1,995,927 |
| 1998 | 1,381,308 | 1,381,308 | - | - | 1,381,308 |
| 1999 | 142,573 | 142,573 | - | - | 142,573 |
| 2000 | 2,219,267 | 2,219,267 | - | - | 2,219,267 |
| 2001 | 1,081,236 | 1,084,938 | - | - | 1,084,938 |
| 2002 | 719,666 | 727,076 | - | - | 727,076 |
| 2003 | 2,190,077 | 2,242,938 | - | - | 2,242,938 |
| 2004 | 1,353,628 | 1,420,364 | - | - | 1,420,364 |
| 2005 | 1,160,547 | 1,246,652 | - | - | 1,246,652 |
| 2006 | 213,084 | 234,210 | - | - | 234,210 |
| 2007 | 2,961,629 | 2,870,172 | - | - | 2,870,172 |
| 2008 | 2,365,876 | 2,365,525 | 2,171,186 | 2,261,316 | 2,171,186 |
| 2009 | 1,240,247 | 1,445,591 | 1,189,496 | 1,474,520 | 1,337,464 |
| 2010 | 368,719 | 378,102 | 812,183 | 593,254 | 378,102 |
| 2011 | 2,859,924 | 2,611,670 | 2,455,816 | 2,436,639 | 2,436,639 |
| 2012 | 1,130,634 | 1,194,538 | 1,422,705 | 1,348,644 | 1,130,634 |
| 2013 | 294,002 | 325,579 | 1,023,163 | 787,717 | 309,791 |
| 2014 | 2,272,090 | 2,346,383 | 2,125,274 | 2,229,120 | 2,125,274 |
| 2015 | 3,703,062 | 3,727,382 | 2,748,311 | 3,079,865 | 2,914,088 |
| 2016 | 1,253,068 | 1,732,453 | 1,819,278 | 1,903,102 | 1,492,761 |
| 2017 | 3,540,070 | 2,874,069 | 2,521,667 | 2,546,704 | 2,534,186 |
| 2018 | 849,434 | 930,100 | 2,267,346 | 1,832,816 | 1,204,117 |
| TOTAL | 37,363,846 | 37,564,595 | 20,556,424 | 20,493,696 | 35,667,443 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Release
 Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED <u>ULTIMATE</u> | (3) PAID <u>LOSS</u> | (4) INCURRED <u>LOSS</u> | (5) CASE <u>RESERVE</u> | (6) IBNR <u>RESERVE</u> | (7) UNPAID <u>LOSS</u> |
|--------------|------------------------------------|----------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1994 | 246,661 | 246,661 | 246,661 | - | - | - |
| 1995 | 241,953 | 241,953 | 241,953 | - | - | - |
| 1996 | 1,579,163 | 1,155,906 | 1,579,163 | 423,257 | - | 423,257 |
| 1997 | 1,995,927 | 1,995,927 | 1,995,927 | - | - | - |
| 1998 | 1,381,308 | 1,296,308 | 1,381,308 | 85,000 | - | 85,000 |
| 1999 | 142,573 | 142,573 | 142,573 | - | - | - |
| 2000 | 2,219,267 | 1,724,971 | 2,219,267 | 494,297 | - | 494,297 |
| 2001 | 1,084,938 | 996,294 | 1,081,236 | 84,942 | 3,703 | 88,644 |
| 2002 | 727,076 | 616,509 | 719,666 | 103,156 | 7,410 | 110,567 |
| 2003 | 2,242,938 | 1,645,324 | 2,190,077 | 544,753 | 52,861 | 597,614 |
| 2004 | 1,420,364 | 1,094,026 | 1,353,628 | 259,602 | 66,736 | 326,338 |
| 2005 | 1,246,652 | 844,136 | 1,160,547 | 316,412 | 86,105 | 402,517 |
| 2006 | 234,210 | 140,820 | 213,084 | 72,264 | 21,126 | 93,390 |
| 2007 | 2,870,172 | 2,297,257 | 2,488,778 | 191,520 | 381,394 | 572,914 |
| 2008 | 2,171,186 | 1,780,630 | 2,052,177 | 271,547 | 119,009 | 390,555 |
| 2009 | 1,337,464 | 743,523 | 1,240,247 | 496,725 | 97,216 | 593,941 |
| 2010 | 378,102 | 245,727 | 316,478 | 70,751 | 61,625 | 132,375 |
| 2011 | 2,436,639 | 1,793,765 | 2,064,707 | 270,942 | 371,932 | 642,874 |
| 2012 | 1,130,634 | 673,028 | 914,659 | 241,631 | 215,975 | 457,606 |
| 2013 | 309,791 | 162,643 | 231,563 | 68,921 | 78,228 | 147,148 |
| 2014 | 2,125,274 | 1,088,861 | 1,573,979 | 485,118 | 551,295 | 1,036,413 |
| 2015 | 2,914,088 | 1,569,832 | 2,292,174 | 722,342 | 621,913 | 1,344,256 |
| 2016 | 1,492,761 | 435,421 | 971,174 | 535,753 | 521,586 | 1,057,340 |
| 2017 | 2,534,186 | 851,011 | 1,479,562 | 628,551 | 1,054,624 | 1,683,175 |
| 2018 | 1,204,117 | 17,593 | 316,002 | 298,409 | 888,115 | 1,186,523 |
| TOTAL | 35,667,443 | 23,800,698 | 30,466,590 | 6,665,892 | 5,200,853 | 11,866,745 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Summary of Ultimate Losses

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) PAID BF <u>ULTIMATE</u> | (5) INC BF <u>ULTIMATE</u> | (6) SELECTED <u>ULTIMATE</u> |
|--------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| 1994 | 875,960 | 875,960 | - | - | 875,960 |
| 1995 | 830,629 | 830,629 | - | - | 830,629 |
| 1996 | 3,961,729 | 3,883,098 | - | - | 3,883,098 |
| 1997 | 4,642,882 | 4,642,882 | - | - | 4,642,882 |
| 1998 | 5,363,065 | 5,363,065 | - | - | 5,363,065 |
| 1999 | 9,777,667 | 9,576,992 | - | - | 9,576,992 |
| 2000 | 5,728,071 | 5,715,439 | - | - | 5,715,439 |
| 2001 | 2,323,281 | 2,277,058 | - | - | 2,277,058 |
| 2002 | 4,676,253 | 4,486,171 | - | - | 4,486,171 |
| 2003 | 3,471,849 | 3,454,424 | - | - | 3,454,424 |
| 2004 | 2,448,871 | 2,399,803 | - | - | 2,399,803 |
| 2005 | 2,727,699 | 2,786,378 | - | - | 2,786,378 |
| 2006 | 1,568,383 | 1,634,727 | - | - | 1,634,727 |
| 2007 | 4,243,288 | 4,003,475 | - | - | 4,003,475 |
| 2008 | 3,068,621 | 3,195,561 | 2,975,158 | 3,153,957 | 3,132,091 |
| 2009 | 2,385,549 | 2,172,775 | 2,444,943 | 2,204,569 | 2,279,162 |
| 2010 | 1,950,285 | 2,032,235 | 2,133,940 | 2,092,052 | 1,991,260 |
| 2011 | 2,059,681 | 1,813,826 | 2,236,988 | 1,909,569 | 1,813,826 |
| 2012 | 2,966,883 | 3,282,856 | 2,870,611 | 3,210,771 | 3,124,869 |
| 2013 | 3,947,335 | 3,702,844 | 3,487,829 | 3,558,188 | 3,523,009 |
| 2014 | 3,016,161 | 3,396,279 | 2,876,578 | 3,282,989 | 2,946,370 |
| 2015 | 3,040,122 | 2,419,470 | 2,850,359 | 2,463,640 | 2,441,555 |
| 2016 | 2,304,864 | 2,514,485 | 2,510,010 | 2,546,208 | 2,409,675 |
| 2017 | 2,543,316 | 2,859,618 | 2,630,388 | 2,803,987 | 2,586,852 |
| 2018 | 2,245,872 | 2,375,350 | 2,650,471 | 2,545,494 | 2,245,872 |
| TOTAL | 82,168,319 | 81,695,400 | 29,667,275 | 29,771,424 | 80,424,642 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED <u>ULTIMATE</u> | (3) PAID <u>LOSS</u> | (4) INCURRED <u>LOSS</u> | (5) CASE <u>RESERVE</u> | (6) IBNR <u>RESERVE</u> | (7) UNPAID <u>LOSS</u> |
|--------------|------------------------------------|----------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1994 | 875,960 | 731,314 | 875,960 | 144,646 | - | 144,646 |
| 1995 | 830,629 | 830,629 | 830,629 | - | - | - |
| 1996 | 3,883,098 | 3,847,779 | 3,883,098 | 35,320 | - | 35,320 |
| 1997 | 4,642,882 | 4,402,894 | 4,642,882 | 239,988 | - | 239,988 |
| 1998 | 5,363,065 | 5,023,106 | 5,363,065 | 339,959 | - | 339,959 |
| 1999 | 9,576,992 | 9,232,961 | 9,576,992 | 344,031 | - | 344,031 |
| 2000 | 5,715,439 | 5,331,739 | 5,687,601 | 355,862 | 27,838 | 383,700 |
| 2001 | 2,277,058 | 2,128,279 | 2,255,449 | 127,170 | 21,609 | 148,779 |
| 2002 | 4,486,171 | 4,208,501 | 4,388,828 | 180,327 | 97,343 | 277,670 |
| 2003 | 3,454,424 | 3,063,698 | 3,379,908 | 316,210 | 74,515 | 390,725 |
| 2004 | 2,399,803 | 2,113,648 | 2,304,758 | 191,110 | 95,046 | 286,156 |
| 2005 | 2,786,378 | 2,309,907 | 2,667,437 | 357,530 | 118,941 | 476,472 |
| 2006 | 1,634,727 | 1,243,210 | 1,568,383 | 325,173 | 66,344 | 391,517 |
| 2007 | 4,003,475 | 3,449,564 | 3,753,895 | 304,331 | 249,580 | 553,912 |
| 2008 | 3,132,091 | 2,441,800 | 2,968,102 | 526,301 | 163,989 | 690,291 |
| 2009 | 2,279,162 | 1,818,009 | 2,023,386 | 205,377 | 255,776 | 461,153 |
| 2010 | 1,991,260 | 1,416,703 | 1,825,960 | 409,256 | 165,300 | 574,557 |
| 2011 | 1,813,826 | 1,439,764 | 1,605,837 | 166,073 | 207,989 | 374,062 |
| 2012 | 3,124,869 | 2,007,539 | 2,897,254 | 889,715 | 227,615 | 1,117,330 |
| 2013 | 3,523,009 | 2,514,517 | 3,178,441 | 663,925 | 344,567 | 1,008,492 |
| 2014 | 2,946,370 | 1,774,763 | 2,861,330 | 1,086,567 | 85,039 | 1,171,607 |
| 2015 | 2,441,555 | 1,527,986 | 1,972,587 | 444,600 | 468,968 | 913,569 |
| 2016 | 2,409,675 | 984,252 | 1,977,045 | 992,792 | 432,630 | 1,425,422 |
| 2017 | 2,586,852 | 768,576 | 2,028,988 | 1,260,412 | 557,864 | 1,818,276 |
| 2018 | 2,245,872 | 211,847 | 1,101,470 | 889,623 | 1,144,402 | 2,034,025 |
| TOTAL | 80,424,642 | 64,822,984 | 75,619,285 | 10,796,300 | 4,805,357 | 15,601,657 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Summary of Ultimate Losses

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) PAID BF <u>ULTIMATE</u> | (5) INC BF <u>ULTIMATE</u> | (6) SELECTED <u>ULTIMATE</u> |
|--------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| 1994 | 3,040,481 | 3,037,783 | - | - | 3,037,783 |
| 1995 | 3,041,597 | 2,945,818 | - | - | 2,945,818 |
| 1996 | 2,344,436 | 2,380,279 | - | - | 2,380,279 |
| 1997 | 3,877,360 | 3,783,030 | - | - | 3,783,030 |
| 1998 | 2,971,774 | 3,055,366 | - | - | 3,055,366 |
| 1999 | 2,879,192 | 2,848,305 | - | - | 2,848,305 |
| 2000 | 3,976,297 | 3,974,075 | - | - | 3,974,075 |
| 2001 | 1,107,092 | 1,164,580 | - | - | 1,164,580 |
| 2002 | 4,548,061 | 4,798,581 | - | - | 4,798,581 |
| 2003 | 3,372,756 | 3,576,030 | - | - | 3,576,030 |
| 2004 | 5,079,848 | 4,880,095 | - | - | 4,880,095 |
| 2005 | 2,219,551 | 2,312,716 | - | - | 2,219,551 |
| 2006 | 3,687,158 | 3,623,565 | - | - | 3,623,565 |
| 2007 | 1,114,898 | 1,062,164 | - | - | 1,062,164 |
| 2008 | 2,590,150 | 2,589,298 | 2,361,753 | 2,448,733 | 2,497,484 |
| 2009 | 1,517,751 | 1,227,996 | 1,680,659 | 1,394,911 | 1,311,453 |
| 2010 | 379,769 | 313,423 | 1,048,687 | 767,613 | 346,596 |
| 2011 | 1,497,560 | 2,180,272 | 1,644,865 | 2,104,893 | 1,856,897 |
| 2012 | 1,299,056 | 1,363,947 | 1,646,834 | 1,573,131 | 1,331,501 |
| 2013 | 1,963,414 | 1,643,996 | 1,963,432 | 1,771,263 | 1,643,996 |
| 2014 | 516,203 | 584,328 | 1,473,223 | 1,206,369 | 550,266 |
| 2015 | 3,797,701 | 3,674,600 | 2,709,518 | 2,778,967 | 2,744,243 |
| 2016 | 1,840,713 | 1,936,816 | 1,927,981 | 1,944,359 | 1,840,713 |
| 2017 | 1,569,257 | 1,921,916 | 1,904,911 | 1,940,937 | 1,745,586 |
| 2018 | 921,715 | 755,270 | 1,944,204 | 1,652,751 | 838,492 |
| TOTAL | 61,153,791 | 61,634,249 | 20,306,068 | 19,583,927 | 60,056,450 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED <u>ULTIMATE</u> | (3) PAID <u>LOSS</u> | (4) INCURRED <u>LOSS</u> | (5) CASE <u>RESERVE</u> | (6) IBNR <u>RESERVE</u> | (7) UNPAID <u>LOSS</u> |
|--------------|------------------------------------|----------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1994 | 3,037,783 | 2,862,976 | 3,022,670 | 159,693 | 15,113 | 174,807 |
| 1995 | 2,945,818 | 2,864,027 | 2,917,052 | 53,025 | 28,766 | 81,791 |
| 1996 | 2,380,279 | 2,154,274 | 2,344,436 | 190,161 | 35,843 | 226,005 |
| 1997 | 3,783,030 | 3,626,458 | 3,703,945 | 77,487 | 79,085 | 156,573 |
| 1998 | 3,055,366 | 2,510,541 | 2,971,774 | 461,233 | 83,592 | 544,825 |
| 1999 | 2,848,305 | 2,650,903 | 2,750,103 | 99,201 | 98,202 | 197,402 |
| 2000 | 3,974,075 | 3,605,836 | 3,805,884 | 200,048 | 168,191 | 368,239 |
| 2001 | 1,164,580 | 928,198 | 1,107,092 | 178,894 | 57,488 | 236,381 |
| 2002 | 4,798,581 | 3,881,563 | 4,459,410 | 577,848 | 339,170 | 917,018 |
| 2003 | 3,576,030 | 2,817,658 | 3,223,096 | 405,438 | 352,934 | 758,372 |
| 2004 | 4,880,095 | 4,112,757 | 4,327,913 | 215,156 | 552,182 | 767,338 |
| 2005 | 2,219,551 | 1,731,576 | 1,963,983 | 232,407 | 255,568 | 487,975 |
| 2006 | 3,623,565 | 2,764,255 | 3,014,915 | 250,659 | 608,651 | 859,310 |
| 2007 | 1,062,164 | 785,680 | 867,453 | 81,773 | 194,711 | 276,484 |
| 2008 | 2,497,484 | 1,717,896 | 2,051,978 | 334,082 | 445,506 | 779,588 |
| 2009 | 1,311,453 | 917,398 | 935,849 | 18,451 | 375,604 | 394,055 |
| 2010 | 346,596 | 214,795 | 224,795 | 10,000 | 121,801 | 131,801 |
| 2011 | 1,856,897 | 724,726 | 1,497,560 | 772,834 | 359,338 | 1,132,172 |
| 2012 | 1,331,501 | 609,736 | 880,779 | 271,044 | 450,722 | 721,766 |
| 2013 | 1,643,996 | 799,890 | 989,033 | 189,143 | 654,963 | 844,106 |
| 2014 | 550,266 | 174,091 | 320,154 | 146,063 | 230,112 | 376,175 |
| 2015 | 2,744,243 | 1,282,058 | 1,769,881 | 487,823 | 974,361 | 1,462,185 |
| 2016 | 1,840,713 | 369,308 | 818,967 | 449,659 | 1,021,746 | 1,471,405 |
| 2017 | 1,745,586 | 199,097 | 771,193 | 572,095 | 974,394 | 1,546,489 |
| 2018 | 838,492 | 24,083 | 198,003 | 173,920 | 640,489 | 814,410 |
| TOTAL | 60,056,450 | 44,329,778 | 50,937,916 | 6,608,138 | 9,118,534 | 15,726,672 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Summary of Ultimate Losses

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) PAID BF <u>ULTIMATE</u> | (5) INC BF <u>ULTIMATE</u> | (6) SELECTED <u>ULTIMATE</u> |
|--------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| 1994 | - | - | - | - | - |
| 1995 | 114,027 | 114,027 | - | - | 114,027 |
| 1996 | 67,357,776 | 67,818,570 | - | - | 67,818,570 |
| 1997 | 8,956,641 | 8,710,315 | - | - | 8,710,315 |
| 1998 | 18,971,581 | 19,151,801 | - | - | 19,151,801 |
| 1999 | 8,377,010 | 8,126,510 | - | - | 8,251,760 |
| 2000 | 14,987,967 | 15,194,204 | - | - | 14,987,967 |
| 2001 | 3,425,000 | 3,485,098 | - | - | 3,485,098 |
| 2002 | 3,382,181 | 3,490,517 | - | - | 3,490,517 |
| 2003 | 1,174,225 | 1,163,566 | - | - | 1,174,225 |
| 2004 | 2,037,947 | 2,167,660 | - | - | 2,167,660 |
| 2005 | 3,164,235 | 3,037,513 | - | - | 3,037,513 |
| 2006 | 533,938 | 592,007 | - | - | 592,007 |
| 2007 | 1,560,892 | 1,472,234 | - | - | 1,560,892 |
| 2008 | 966,979 | 725,305 | 1,021,361 | 774,460 | 725,305 |
| 2009 | 1,064,734 | 885,617 | 1,083,792 | 914,419 | 885,617 |
| 2010 | 886,809 | 1,024,476 | 954,030 | 1,036,246 | 975,390 |
| 2011 | 1,773,194 | 2,088,904 | 1,400,397 | 1,940,749 | 1,940,749 |
| 2012 | 522,057 | 430,973 | 802,755 | 541,498 | 476,515 |
| 2013 | 1,311,204 | 1,280,640 | 1,204,583 | 1,250,494 | 1,227,539 |
| 2014 | 1,193,782 | 938,415 | 1,143,612 | 974,293 | 1,018,773 |
| 2015 | 225,947 | 302,923 | 746,342 | 513,965 | 447,294 |
| 2016 | 985,060 | 1,214,312 | 1,057,101 | 1,180,912 | 1,021,080 |
| 2017 | 1,262,204 | 991,881 | 1,134,316 | 1,026,135 | 991,881 |
| 2018 | 1,347,600 | 1,193,420 | 1,107,717 | 1,142,432 | 1,147,856 |
| TOTAL | 145,582,991 | 145,600,888 | 11,656,005 | 11,295,603 | 145,400,352 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED <u>ULTIMATE</u> | (3) PAID <u>LOSS</u> | (4) INCURRED <u>LOSS</u> | (5) CASE <u>RESERVE</u> | (6) IBNR <u>RESERVE</u> | (7) UNPAID <u>LOSS</u> |
|--------------|------------------------------------|----------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1994 | - | - | - | - | - | - |
| 1995 | 114,027 | 114,027 | 114,027 | - | - | - |
| 1996 | 67,818,570 | 60,816,782 | 67,147,099 | 6,330,317 | 671,471 | 7,001,788 |
| 1997 | 8,710,315 | 8,056,789 | 8,662,253 | 605,464 | 48,062 | 653,526 |
| 1998 | 19,151,801 | 16,792,391 | 18,971,581 | 2,179,191 | 180,220 | 2,359,410 |
| 1999 | 8,251,760 | 7,276,048 | 8,039,539 | 763,491 | 212,221 | 975,713 |
| 2000 | 14,987,967 | 12,583,946 | 14,987,967 | 2,404,021 | - | 2,404,021 |
| 2001 | 3,485,098 | 2,135,112 | 3,425,000 | 1,289,889 | 60,098 | 1,349,986 |
| 2002 | 3,490,517 | 2,737,830 | 3,340,765 | 602,935 | 149,753 | 752,687 |
| 2003 | 1,174,225 | 925,066 | 1,107,025 | 181,959 | 67,200 | 249,159 |
| 2004 | 2,167,660 | 1,508,295 | 2,037,947 | 529,652 | 129,713 | 659,365 |
| 2005 | 3,037,513 | 2,334,050 | 2,778,623 | 444,573 | 258,890 | 703,463 |
| 2006 | 592,007 | 300,938 | 533,938 | 233,000 | 58,069 | 291,069 |
| 2007 | 1,560,892 | 1,076,420 | 1,302,593 | 226,173 | 258,299 | 484,473 |
| 2008 | 725,305 | 615,335 | 634,174 | 18,839 | 91,131 | 109,971 |
| 2009 | 885,617 | 659,857 | 774,343 | 114,485 | 111,274 | 225,759 |
| 2010 | 975,390 | 485,492 | 886,809 | 401,317 | 88,581 | 489,899 |
| 2011 | 1,940,749 | 904,905 | 1,773,194 | 868,290 | 167,554 | 1,035,844 |
| 2012 | 476,515 | 271,398 | 360,480 | 89,082 | 116,036 | 205,117 |
| 2013 | 1,227,539 | 636,244 | 1,061,991 | 425,747 | 165,547 | 591,294 |
| 2014 | 1,018,773 | 548,829 | 731,229 | 182,400 | 287,544 | 469,944 |
| 2015 | 447,294 | 91,292 | 222,633 | 131,341 | 224,662 | 356,002 |
| 2016 | 1,021,080 | 350,684 | 868,811 | 518,127 | 152,270 | 670,396 |
| 2017 | 991,881 | 295,863 | 662,913 | 367,050 | 328,968 | 696,018 |
| 2018 | 1,147,856 | 73,595 | 582,223 | 508,627 | 565,634 | 1,074,261 |
| TOTAL | 145,400,352 | 121,591,186 | 141,007,156 | 19,415,970 | 4,393,197 | 23,809,166 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Summary of Ultimate Losses

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) PAID BF <u>ULTIMATE</u> | (5) INC BF <u>ULTIMATE</u> | (6) SELECTED <u>ULTIMATE</u> |
|--------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| 1994 | - | - | - | - | - |
| 1995 | - | - | - | - | - |
| 1996 | - | - | - | - | - |
| 1997 | - | - | - | - | - |
| 1998 | 478,042 | 478,042 | - | - | 478,042 |
| 1999 | 2,690,066 | 2,689,230 | - | - | 2,689,230 |
| 2000 | 1,195,793 | 1,195,793 | - | - | 1,195,793 |
| 2001 | 6,664,686 | 6,667,797 | - | - | 6,667,797 |
| 2002 | 2,382,845 | 2,386,183 | - | - | 2,386,183 |
| 2003 | 1,543,256 | 1,548,303 | - | - | 1,548,303 |
| 2004 | 3,064,971 | 2,865,372 | - | - | 3,064,971 |
| 2005 | 2,175,022 | 2,206,643 | - | - | 2,206,643 |
| 2006 | 2,166,914 | 2,154,225 | - | - | 2,166,914 |
| 2007 | 1,473,322 | 1,257,175 | - | - | 1,365,248 |
| 2008 | 752,679 | 609,737 | 774,828 | 620,746 | 681,208 |
| 2009 | 1,082,577 | 1,046,180 | 1,039,364 | 1,039,640 | 1,064,378 |
| 2010 | 725,760 | 739,771 | 802,473 | 744,555 | 732,765 |
| 2011 | 1,328,055 | 1,079,586 | 1,368,269 | 1,126,569 | 1,079,586 |
| 2012 | 3,201,767 | 2,868,213 | 2,599,672 | 2,709,427 | 2,725,771 |
| 2013 | 1,679,661 | 1,394,147 | 1,772,251 | 1,476,490 | 1,536,904 |
| 2014 | 817,642 | 1,016,535 | 1,088,243 | 1,207,055 | 1,016,535 |
| 2015 | 825,614 | 931,030 | 1,506,764 | 1,175,883 | 931,030 |
| 2016 | 2,057,290 | 1,796,378 | 2,065,817 | 1,855,672 | 1,903,113 |
| 2017 | 3,004,613 | 3,943,594 | 2,326,512 | 3,509,877 | 3,196,149 |
| 2018 | 1,743,650 | 3,018,130 | 2,112,690 | 2,661,107 | 2,383,894 |
| TOTAL | 41,054,224 | 41,892,064 | 17,456,884 | 18,127,021 | 41,020,459 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED <u>ULTIMATE</u> | (3) PAID <u>LOSS</u> | (4) INCURRED <u>LOSS</u> | (5) CASE <u>RESERVE</u> | (6) IBNR <u>RESERVE</u> | (7) UNPAID <u>LOSS</u> |
|--------------|------------------------------------|----------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1994 | - | - | - | - | - | - |
| 1995 | - | - | - | - | - | - |
| 1996 | - | - | - | - | - | - |
| 1997 | - | - | - | - | - | - |
| 1998 | 478,042 | 478,042 | 478,042 | - | - | - |
| 1999 | 2,689,230 | 2,532,094 | 2,689,230 | 157,136 | - | 157,136 |
| 2000 | 1,195,793 | 1,195,793 | 1,195,793 | - | - | - |
| 2001 | 6,667,797 | 5,757,861 | 6,664,686 | 906,825 | 3,111 | 909,936 |
| 2002 | 2,386,183 | 1,692,921 | 2,382,845 | 689,924 | 3,338 | 693,262 |
| 2003 | 1,548,303 | 1,276,743 | 1,543,256 | 266,513 | 5,047 | 271,561 |
| 2004 | 3,064,971 | 2,645,562 | 2,845,405 | 199,843 | 219,566 | 419,409 |
| 2005 | 2,206,643 | 1,616,331 | 2,175,022 | 558,691 | 31,621 | 590,312 |
| 2006 | 2,166,914 | 1,755,125 | 2,138,100 | 382,976 | 28,814 | 411,790 |
| 2007 | 1,365,248 | 1,150,527 | 1,194,026 | 43,499 | 171,223 | 214,721 |
| 2008 | 681,208 | 554,141 | 580,153 | 26,011 | 101,055 | 127,066 |
| 2009 | 1,064,378 | 758,059 | 982,683 | 224,624 | 81,696 | 306,320 |
| 2010 | 732,765 | 466,760 | 725,760 | 259,000 | 7,006 | 266,006 |
| 2011 | 1,079,586 | 815,994 | 935,802 | 119,808 | 143,784 | 263,592 |
| 2012 | 2,725,771 | 1,849,816 | 2,451,291 | 601,475 | 274,480 | 875,954 |
| 2013 | 1,536,904 | 909,739 | 1,158,669 | 248,930 | 378,235 | 627,165 |
| 2014 | 1,016,535 | 74,003 | 817,642 | 743,639 | 198,893 | 942,532 |
| 2015 | 931,030 | 359,484 | 723,985 | 364,501 | 207,045 | 571,546 |
| 2016 | 1,903,113 | 727,719 | 1,407,791 | 680,072 | 495,322 | 1,175,394 |
| 2017 | 3,196,149 | 771,285 | 3,004,613 | 2,233,328 | 191,536 | 2,424,864 |
| 2018 | 2,383,894 | 153,788 | 1,743,650 | 1,589,862 | 640,244 | 2,230,106 |
| TOTAL | 41,020,459 | 27,541,785 | 37,838,443 | 10,296,657 | 3,182,016 | 13,478,673 |

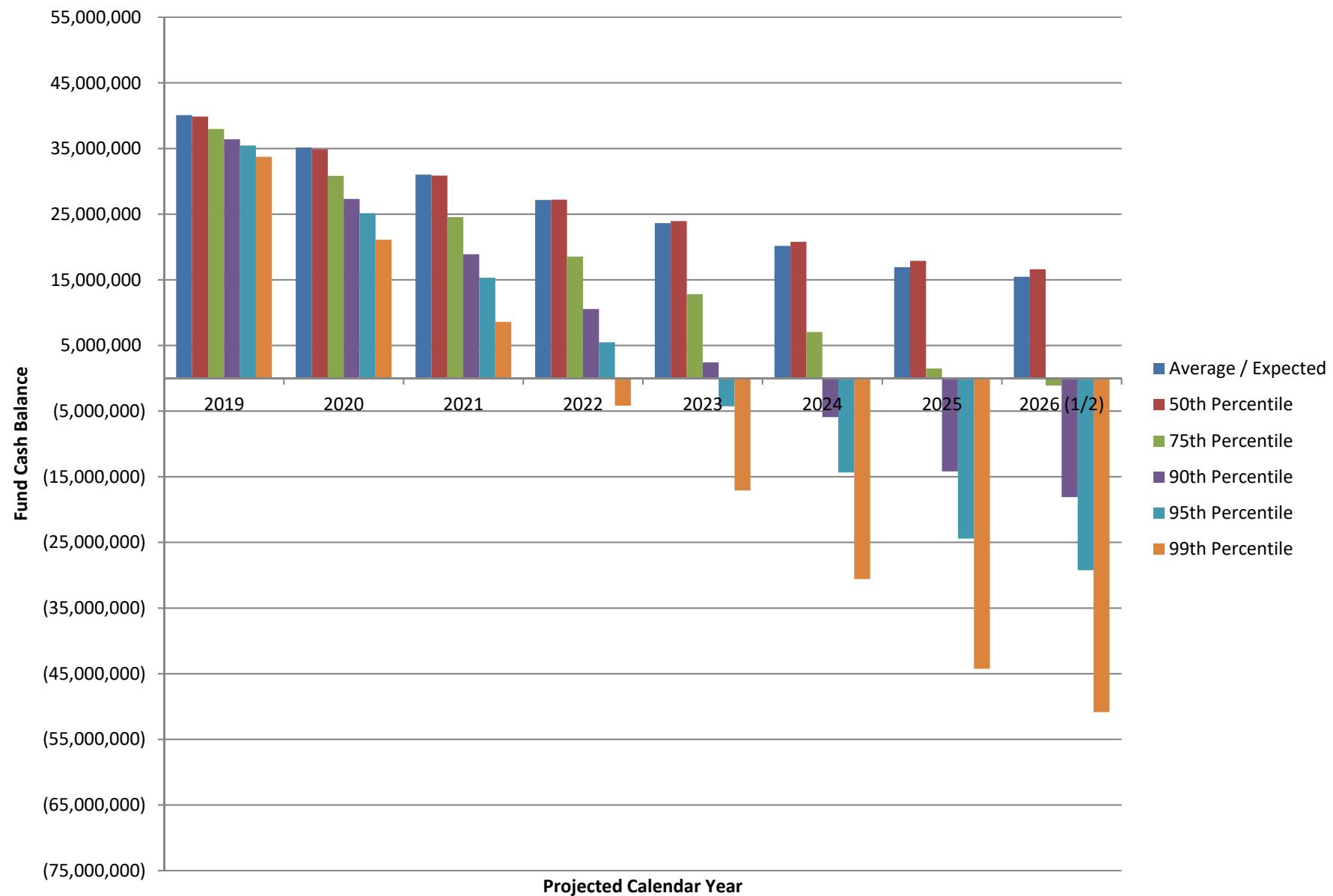
Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Summary of Ultimate Losses

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) PAID BF <u>ULTIMATE</u> | (5) INC BF <u>ULTIMATE</u> | (6) SELECTED <u>ULTIMATE</u> |
|--------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| <u>1994</u> | - | - | - | - | - |
| 1995 | 106,826 | 106,826 | - | - | 106,826 |
| 1996 | 109,456 | 109,456 | - | - | 109,456 |
| 1997 | - | - | - | - | - |
| 1998 | 662,586 | 635,093 | - | - | 635,093 |
| 1999 | 1,500,783 | 1,500,783 | - | - | 1,500,783 |
| 2000 | 5,376,624 | 5,376,624 | - | - | 5,376,624 |
| 2001 | 1,621,524 | 1,621,524 | - | - | 1,621,524 |
| 2002 | 239,493 | 239,493 | - | - | 239,493 |
| 2003 | 582,435 | 552,376 | - | - | 582,435 |
| 2004 | 2,060,194 | 2,053,795 | - | - | 2,060,194 |
| 2005 | 79,838 | 90,100 | - | - | 79,838 |
| 2006 | - | - | - | - | - |
| 2007 | 41,750 | 51,726 | - | - | 41,750 |
| 2008 | 51,787 | 66,060 | 105,515 | 91,192 | 51,787 |
| 2009 | 268,109 | 258,423 | 235,987 | 236,263 | 258,423 |
| 2010 | - | - | 84,462 | 57,616 | - |
| 2011 | - | - | 99,070 | 58,624 | - |
| 2012 | - | - | 112,491 | 64,913 | - |
| 2013 | - | - | 125,074 | 69,065 | - |
| 2014 | - | - | 134,602 | 80,135 | - |
| 2015 | 481,642 | 328,150 | 288,732 | 279,588 | 328,150 |
| 2016 | - | - | 158,292 | 85,475 | - |
| 2017 | 325,861 | 128,301 | 233,990 | 171,126 | 128,301 |
| 2018 | - | - | 200,523 | 146,106 | 173,314 |
| TOTAL | 13,508,906 | 13,118,729 | 1,778,736 | 1,340,102 | 13,293,989 |

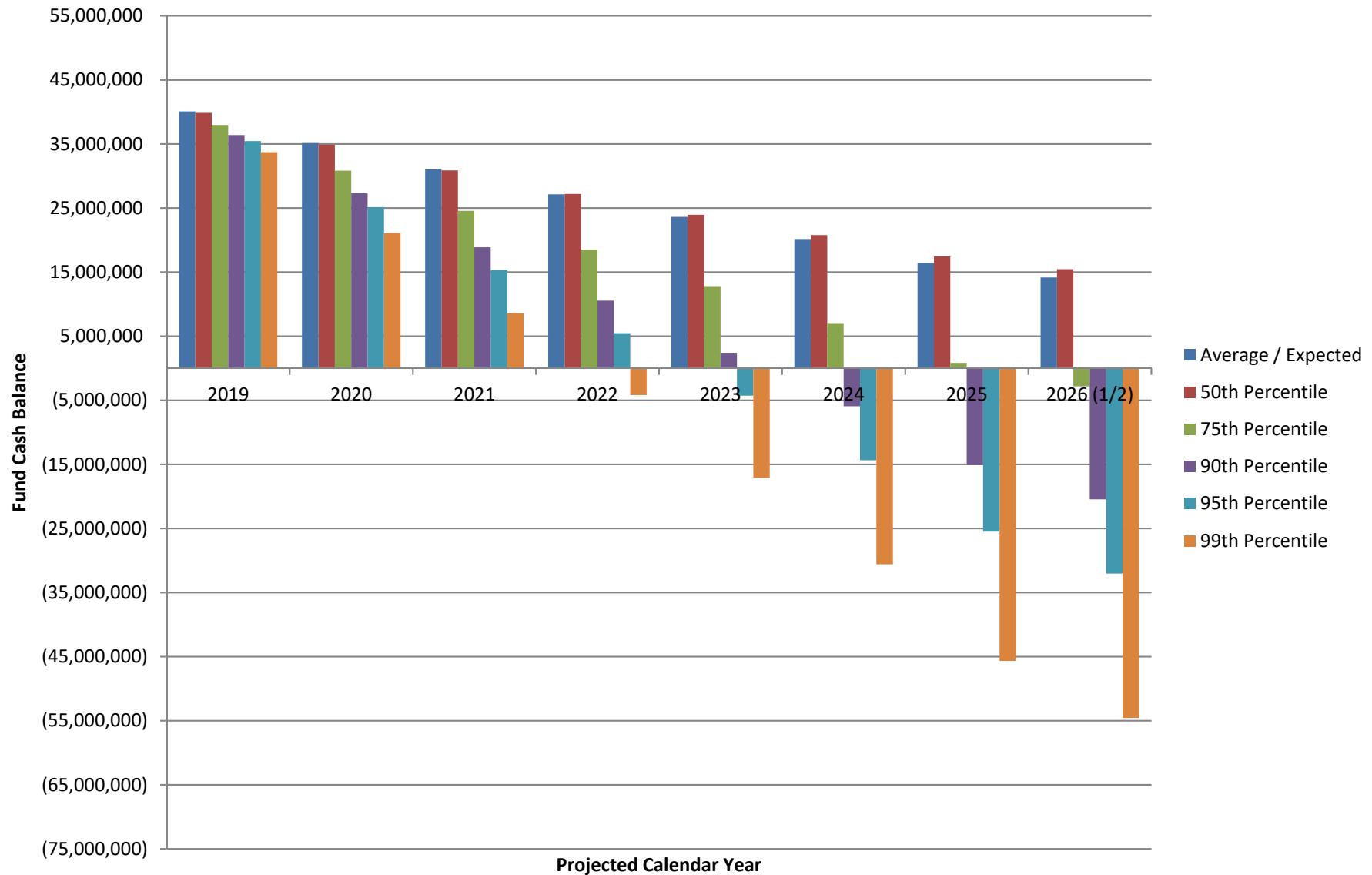
Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Summary of Case & IBNR Reserves

| (1) RY | (2) SELECTED <u>ULTIMATE</u> | (3) PAID <u>LOSS</u> | (4) INCURRED <u>LOSS</u> | (5) CASE <u>RESERVE</u> | (6) IBNR <u>RESERVE</u> | (7) UNPAID <u>LOSS</u> |
|--------------|------------------------------------|----------------------------|--------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1994 | - | - | - | - | - | - |
| 1995 | 106,826 | 106,826 | 106,826 | - | - | - |
| 1996 | 109,456 | 109,456 | 109,456 | - | - | - |
| 1997 | - | - | - | - | - | - |
| 1998 | 635,093 | 635,092 | 635,093 | 1 | - | 1 |
| 1999 | 1,500,783 | 1,390,883 | 1,500,783 | 109,899 | - | 109,899 |
| 2000 | 5,376,624 | 3,920,130 | 5,376,624 | 1,456,494 | - | 1,456,494 |
| 2001 | 1,621,524 | 1,166,740 | 1,621,524 | 454,784 | - | 454,784 |
| 2002 | 239,493 | 239,493 | 239,493 | - | - | - |
| 2003 | 582,435 | 501,430 | 552,376 | 50,946 | 30,059 | 81,005 |
| 2004 | 2,060,194 | 1,703,105 | 1,859,341 | 156,236 | 200,853 | 357,089 |
| 2005 | 79,838 | 79,838 | 79,838 | - | - | - |
| 2006 | - | - | - | - | - | - |
| 2007 | 41,750 | 41,750 | 41,750 | - | - | - |
| 2008 | 51,787 | 51,787 | 51,787 | - | - | - |
| 2009 | 258,423 | 163,657 | 179,722 | 16,065 | 78,701 | 94,766 |
| 2010 | - | - | - | - | - | - |
| 2011 | - | - | - | - | - | - |
| 2012 | - | - | - | - | - | - |
| 2013 | - | - | - | - | - | - |
| 2014 | - | - | - | - | - | - |
| 2015 | 328,150 | 142,401 | 195,789 | 53,388 | 132,361 | 185,748 |
| 2016 | - | - | - | - | - | - |
| 2017 | 128,301 | 53,255 | 65,680 | 12,425 | 62,622 | 75,046 |
| 2018 | 173,314 | - | - | - | 173,314 | 173,314 |
| TOTAL | 13,293,989 | 10,305,842 | 12,616,079 | 2,310,237 | 677,910 | 2,988,146 |

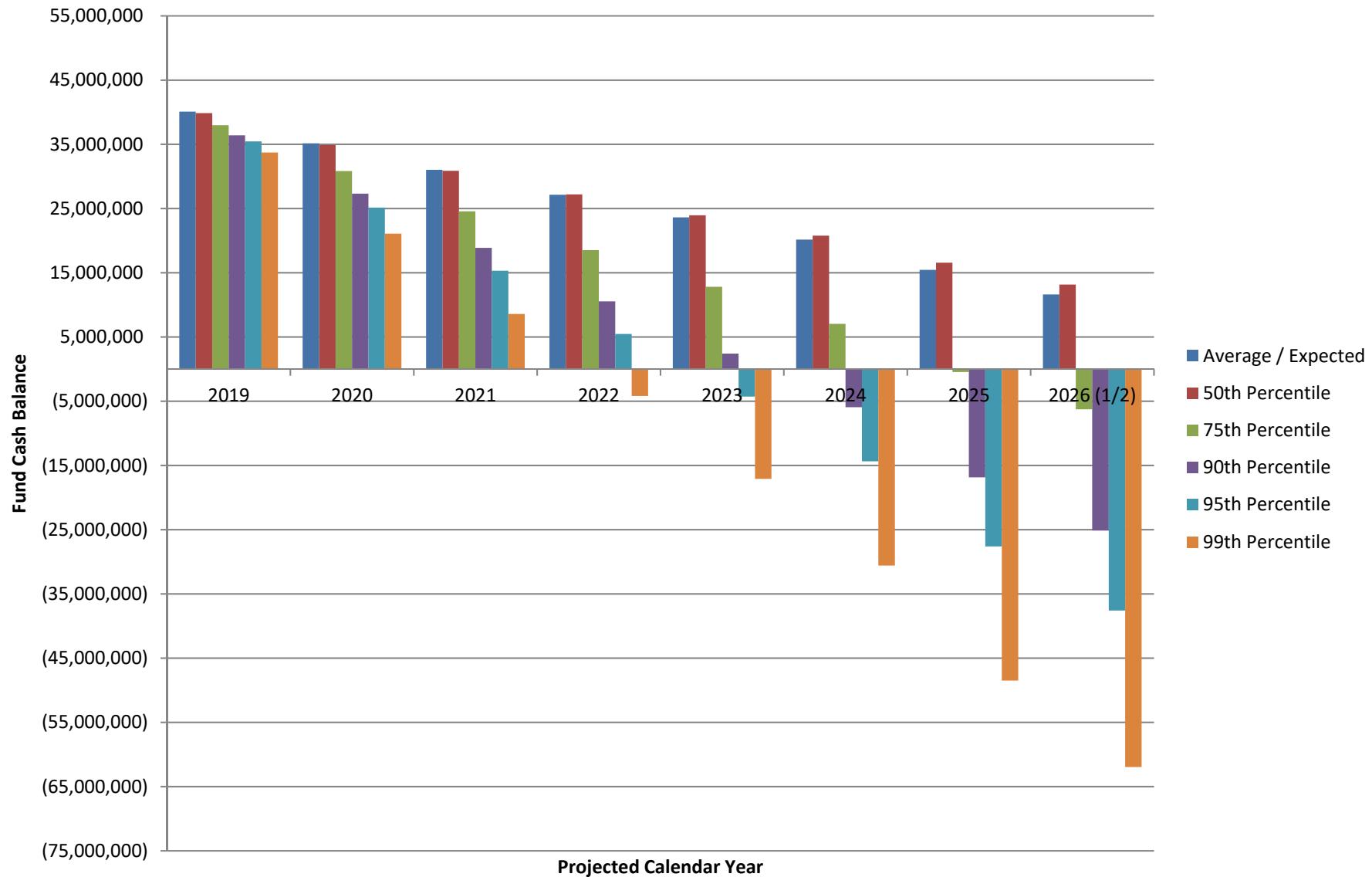
Projected Cash Balance by Calendar Year at Confidence Levels



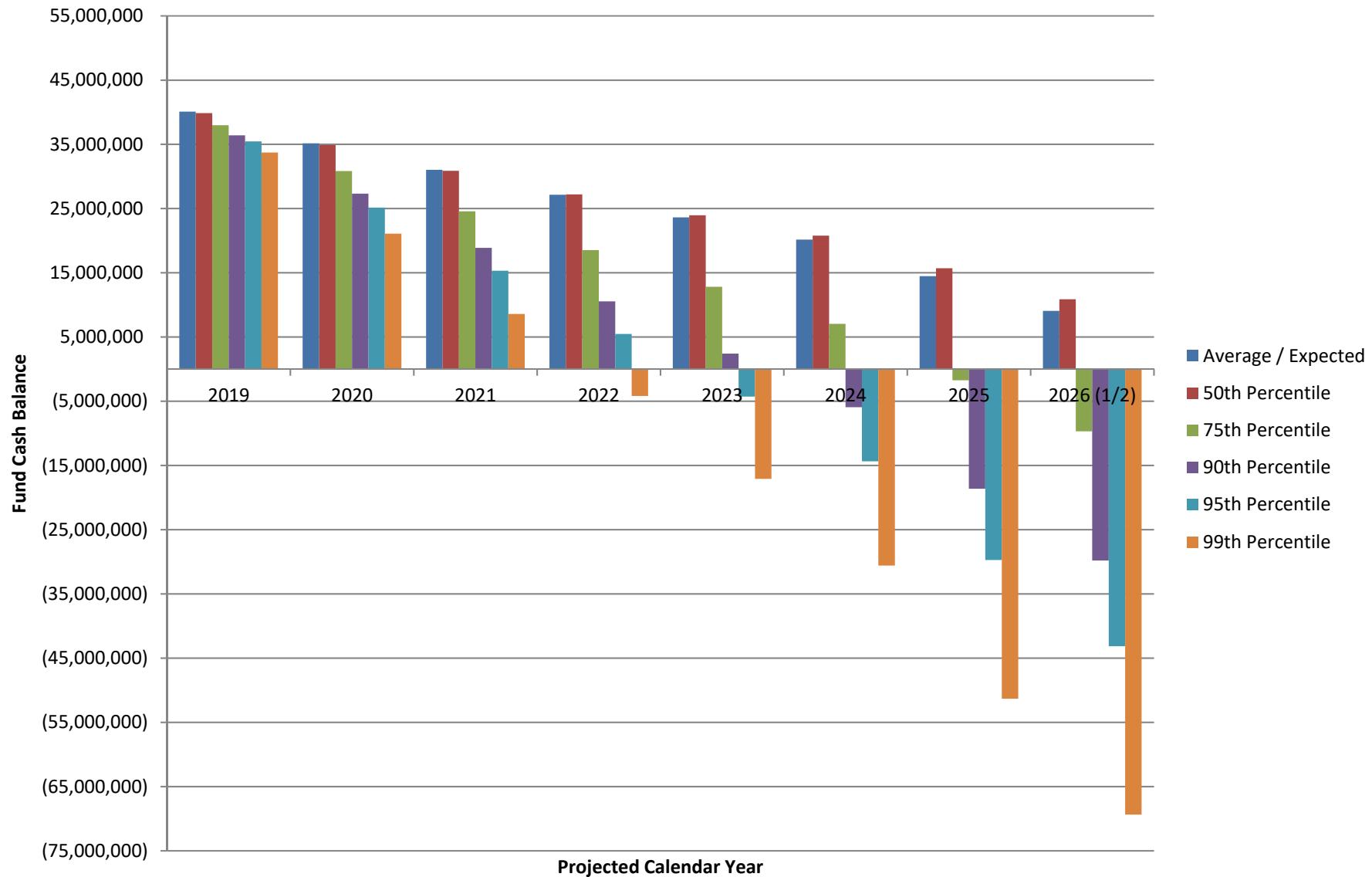
Projected Cash Balance by Calendar Year at Confidence Levels with Increased Claim Activity due to Fund Sunset; Low Scenario



Projected Cash Balance by Calendar Year at Confidence Levels with Increased Claim Activity due to Fund Sunset; Middle Scenario



Projected Cash Balance by Calendar Year at Confidence Levels with Increased Claim Activity due to Fund Sunset; High Scenario



Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 All Claim Types
 Financial Projections Based on PSTIF 2018 Projections

| | (A) Annual Revenues Fiscal Year: | (B) 2019 | (C) 2020 | (D) 2021 | (E) 2022 | (F) 2023 | (G) 2024 | (H) 2025 | (I) 2026 (1/2) | (J) Totals |
|--------------------------------------|-------------------------------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------------|---------------|
| (1) | Transport load fees | 11,500,000 | 11,450,000 | 11,400,000 | 11,350,000 | 11,300,000 | 11,250,000 | 11,200,000 | 5,575,000 | 85,025,000 |
| (2) | 100 Initial tank fees | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 8,500 | 127,500 |
| (3) | UST participation fees | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 445,000 | 6,675,000 |
| (4) | AST participation fees | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 165,000 | 2,475,000 |
| (5) | Interest income | 785,000 | 705,714 | 617,173 | 542,770 | 477,227 | 416,585 | 359,177 | 152,035 | 4,055,681 |
| (6) | Total Revenues | 13,522,000 | 13,392,714 | 13,254,173 | 13,129,770 | 13,014,227 | 12,903,585 | 12,796,177 | 6,345,535 | 98,358,181 |
| | | | | | | | | | | |
| Administrative Expenses Fiscal Year: | | | | | | | | | | |
| (7) | Third Party Administrative Expenses | 2,265,000 | 2,219,700 | 2,175,306 | 2,131,800 | 2,089,164 | 2,047,381 | 2,006,433 | 983,152 | 15,917,936 |
| (8) | Contingency & Special Projects | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 45,000 | 675,000 |
| (9) | Office of Administration | 82,401 | 84,873 | 87,419 | 90,042 | 92,743 | 95,525 | 98,391 | 50,671 | 682,066 |
| (10) | Section 319.107 Expenses | 10,000 | 10,300 | 10,609 | 10,927 | 11,255 | 11,593 | 11,941 | 6,149 | 82,774 |
| (11) | Underwriting | 555,650 | 572,320 | 589,489 | 607,174 | 625,389 | 644,151 | 663,475 | 341,690 | 4,599,337 |
| (12) | Inspections | 342,351 | 352,622 | 363,200 | 374,096 | 385,319 | 396,879 | 408,785 | 210,524 | 2,833,776 |
| (13) | Training & Loss Prevention Services | 12,000 | 12,360 | 12,731 | 13,113 | 13,506 | 13,911 | 14,329 | 7,379 | 99,329 |
| (14) | Other Professional Expenses | 431,135 | 444,069 | 457,391 | 471,113 | 485,246 | 499,804 | 514,798 | 265,121 | 3,568,676 |
| (15) | Legal Expenses | 200,000 | 206,000 | 212,180 | 218,545 | 225,102 | 231,855 | 238,810 | 122,987 | 1,655,480 |
| (16) | Department of Revenue | 45,303 | 46,662 | 48,062 | 49,504 | 50,989 | 52,519 | 54,094 | 27,858 | 374,991 |
| (17) | Attorney General's Office | 42,918 | 44,206 | 45,532 | 46,898 | 48,305 | 49,754 | 51,246 | 26,392 | 355,249 |
| (18) | PSTIF Board/Staff | 290,700 | 299,421 | 308,404 | 317,656 | 327,185 | 337,001 | 347,111 | 178,762 | 2,406,240 |
| (19) | Department of Natural Resources | 1,621,657 | 1,670,307 | 1,720,416 | 1,772,028 | 1,825,189 | 1,879,945 | 1,936,343 | 997,217 | 13,423,102 |
| (20) | Total Administrative Expenses | 5,989,115 | 6,052,838 | 6,120,739 | 6,192,895 | 6,269,392 | 6,350,316 | 6,435,756 | 3,262,904 | 46,673,956 |
| | | | | | | | | | | |
| Claim Payments Fiscal Year: | | | | | | | | | | |
| (21) | Average / Expected | 13,378,116 | 12,287,121 | 11,255,339 | 10,804,233 | 10,269,262 | 10,026,562 | 9,604,324 | 4,546,594 | 82,171,552 |
| (22) | 50th Percentile Losses | 13,608,254 | 12,309,629 | 11,144,380 | 10,608,634 | 10,004,831 | 9,720,437 | 9,256,942 | 4,363,470 | 81,016,577 |
| (23) | 75th Percentile Losses | 15,498,439 | 14,466,006 | 13,414,596 | 12,968,550 | 12,460,868 | 12,320,816 | 11,922,823 | 5,671,501 | 98,723,600 |
| (24) | 90th Percentile Losses | 17,073,153 | 16,418,408 | 15,570,942 | 15,270,575 | 14,876,630 | 14,901,642 | 14,619,517 | 6,997,014 | 115,727,880 |
| (25) | 95th Percentile Losses | 18,011,217 | 17,652,805 | 16,968,054 | 16,774,229 | 16,490,203 | 16,633,864 | 16,433,722 | 7,899,802 | 126,863,895 |
| (26) | 99th Percentile Losses | 19,736,079 | 19,979,910 | 19,642,345 | 19,699,351 | 19,651,135 | 20,057,405 | 20,018,264 | 9,700,490 | 148,484,979 |
| (27) | Cash balance @ 6/30/18 | 45,933,353 | | | | | | | | |
| | | | | | | | | | | |
| Funds Available at Fiscal Year-End: | | | | | | | | | | |
| (28) | Average / Expected | 40,088,122 | 35,140,876 | 31,018,971 | 27,151,612 | 23,627,186 | 20,153,893 | 16,909,989 | 15,446,026 | |
| (29) | 50th Percentile | 39,857,984 | 34,888,231 | 30,877,285 | 27,205,526 | 23,945,530 | 20,778,363 | 17,881,840 | 16,601,001 | |
| (30) | 75th Percentile | 37,967,799 | 30,841,669 | 24,560,507 | 18,528,832 | 12,812,798 | 7,045,251 | 1,482,849 | (1,106,021) | |
| (31) | 90th Percentile | 36,393,085 | 27,314,553 | 18,877,046 | 10,543,346 | 2,411,550 | (5,936,822) | (14,195,918) | (18,110,302) | |
| (32) | 95th Percentile | 35,455,021 | 25,142,091 | 15,307,472 | 5,470,118 | (4,275,250) | (14,355,844) | (24,429,146) | (29,246,317) | |
| (33) | 99th Percentile | 33,730,159 | 21,090,125 | 8,581,215 | (4,181,261) | (17,087,561) | (30,591,697) | (44,249,541) | (50,867,400) | |

Notes: Rows (1) through (18) from Financial Projections provided by PSTIF with some minor differences due to rounding.

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

All Claim Types

Financial Projections Based on PSTIF 2018 Projections w/Increased Activity due to Sunset, Low Scenario

| (A) Annual Revenues Fiscal Year: | (B) 2019 | (C) 2020 | (D) 2021 | (E) 2022 | (F) 2023 | (G) 2024 | (H) 2025 | (I) 2026 (1/2) | (J) Totals |
|--|-------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------------|---------------|
| (1) Transport load fees | 11,500,000 | 11,450,000 | 11,400,000 | 11,350,000 | 11,300,000 | 11,250,000 | 11,200,000 | 5,575,000 | 85,025,000 |
| (2) 100 Initial tank fees | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 8,500 | 127,500 |
| (3) UST participation fees | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 445,000 | 6,675,000 |
| (4) AST participation fees | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 165,000 | 2,475,000 |
| (5) Interest income | 785,000 | 705,714 | 617,173 | 542,770 | 477,227 | 416,585 | 359,177 | 152,035 | 4,055,681 |
| (6) Total Revenues | 13,522,000 | 13,392,714 | 13,254,173 | 13,129,770 | 13,014,227 | 12,903,585 | 12,796,177 | 6,345,535 | 98,358,181 |
| Administrative Expenses Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (7) Third Party Administrative Expenses | 2,265,000 | 2,219,700 | 2,175,306 | 2,131,800 | 2,089,164 | 2,047,381 | 2,006,433 | 983,152 | 15,917,936 |
| (8) Contingency & Special Projects | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 45,000 | 675,000 |
| (9) Office of Administration | 82,401 | 84,873 | 87,419 | 90,042 | 92,743 | 95,525 | 98,391 | 50,671 | 682,066 |
| (10) Section 319.107 Expenses | 10,000 | 10,300 | 10,609 | 10,927 | 11,255 | 11,593 | 11,941 | 6,149 | 82,774 |
| (11) Underwriting | 555,650 | 572,320 | 589,489 | 607,174 | 625,389 | 644,151 | 663,475 | 341,690 | 4,599,337 |
| (12) Inspections | 342,351 | 352,622 | 363,200 | 374,096 | 385,319 | 396,879 | 408,785 | 210,524 | 2,833,776 |
| (13) Training & Loss Prevention Services | 12,000 | 12,360 | 12,731 | 13,113 | 13,506 | 13,911 | 14,329 | 7,379 | 99,329 |
| (14) Other Professional Expenses | 431,135 | 444,069 | 457,391 | 471,113 | 485,246 | 499,804 | 514,798 | 265,121 | 3,568,676 |
| (15) Legal Expenses | 200,000 | 206,000 | 212,180 | 218,545 | 225,102 | 231,855 | 238,810 | 122,987 | 1,655,480 |
| (16) Department of Revenue | 45,303 | 46,662 | 48,062 | 49,504 | 50,989 | 52,519 | 54,094 | 27,858 | 374,991 |
| (17) Attorney General's Office | 42,918 | 44,206 | 45,532 | 46,898 | 48,305 | 49,754 | 51,246 | 26,392 | 355,249 |
| (18) PSTIF Board/Staff | 290,700 | 299,421 | 308,404 | 317,656 | 327,185 | 337,001 | 347,111 | 178,762 | 2,406,240 |
| (19) Department of Natural Resources | 1,621,657 | 1,670,307 | 1,720,416 | 1,772,028 | 1,825,189 | 1,879,945 | 1,936,343 | 997,217 | 13,423,102 |
| (20) Total Administrative Expenses | 5,989,115 | 6,052,838 | 6,120,739 | 6,192,895 | 6,269,392 | 6,350,316 | 6,435,756 | 3,262,904 | 46,673,956 |
| Claim Payments Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (21) Average / Expected | 13,378,116 | 12,287,121 | 11,255,339 | 10,804,233 | 10,269,262 | 10,026,562 | 10,090,494 | 5,336,502 | 83,447,631 |
| (22) 50th Percentile Losses | 13,608,254 | 12,309,629 | 11,144,380 | 10,608,634 | 10,004,831 | 9,720,437 | 9,692,448 | 5,071,847 | 82,160,460 |
| (23) 75th Percentile Losses | 15,498,439 | 14,466,006 | 13,414,596 | 12,968,550 | 12,460,868 | 12,320,816 | 12,569,046 | 6,741,927 | 100,440,249 |
| (24) 90th Percentile Losses | 17,073,153 | 16,418,408 | 15,570,942 | 15,270,575 | 14,876,630 | 14,901,642 | 15,504,621 | 8,450,002 | 118,065,972 |
| (25) 95th Percentile Losses | 18,011,217 | 17,652,805 | 16,968,054 | 16,774,229 | 16,490,203 | 16,633,864 | 17,493,239 | 9,621,157 | 129,644,767 |
| (26) 99th Percentile Losses | 19,736,079 | 19,979,910 | 19,642,345 | 19,699,351 | 19,651,135 | 20,057,405 | 21,431,089 | 11,987,126 | 152,184,439 |
| (27) Cash balance @ 6/30/18 | 45,933,353 | | | | | | | | |
| Funds Available at Fiscal Year-End: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | |
| (28) Average / Expected | 40,088,122 | 35,140,876 | 31,018,971 | 27,151,612 | 23,627,186 | 20,153,893 | 16,423,819 | 14,169,947 | |
| (29) 50th Percentile | 39,857,984 | 34,888,231 | 30,877,285 | 27,205,526 | 23,945,530 | 20,778,363 | 17,446,335 | 15,457,118 | |
| (30) 75th Percentile | 37,967,799 | 30,841,669 | 24,560,507 | 18,528,832 | 12,812,798 | 7,045,251 | 836,626 | (2,822,670) | |
| (31) 90th Percentile | 36,393,085 | 27,314,553 | 18,877,046 | 10,543,346 | 2,411,550 | (5,936,822) | (15,081,023) | (20,448,394) | |
| (32) 95th Percentile | 35,455,021 | 25,142,091 | 15,307,472 | 5,470,118 | (4,275,250) | (14,355,844) | (25,488,663) | (32,027,189) | |
| (33) 99th Percentile | 33,730,159 | 21,090,125 | 8,581,215 | (4,181,261) | (17,087,561) | (30,591,697) | (45,662,366) | (54,566,860) | |

Notes: Rows (1) through (18) from Financial Projections provided by PSTIF with some minor differences due to rounding.

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

All Claim Types

Financial Projections Based on PSTIF 2018 Projections w/Increased Activity due to Sunset, Middle Scenario

| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
|--|------------|------------|------------|-------------|--------------|--------------|--------------|--------------|-------------|
| Annual Revenues Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (1) Transport load fees | 11,500,000 | 11,450,000 | 11,400,000 | 11,350,000 | 11,300,000 | 11,250,000 | 11,200,000 | 5,575,000 | 85,025,000 |
| (2) 100 Initial tank fees | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 8,500 | 127,500 |
| (3) UST participation fees | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 445,000 | 6,675,000 |
| (4) AST participation fees | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 165,000 | 2,475,000 |
| (5) Interest income | 785,000 | 705,714 | 617,173 | 542,770 | 477,227 | 416,585 | 359,177 | 152,035 | 4,055,681 |
| (6) Total Revenues | 13,522,000 | 13,392,714 | 13,254,173 | 13,129,770 | 13,014,227 | 12,903,585 | 12,796,177 | 6,345,535 | 98,358,181 |
| Administrative Expenses Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (7) Third Party Administrative Expenses | 2,265,000 | 2,219,700 | 2,175,306 | 2,131,800 | 2,089,164 | 2,047,381 | 2,006,433 | 983,152 | 15,917,936 |
| (8) Contingency & Special Projects | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 45,000 | 675,000 |
| (9) Office of Administration | 82,401 | 84,873 | 87,419 | 90,042 | 92,743 | 95,525 | 98,391 | 50,671 | 682,066 |
| (10) Section 319.107 Expenses | 10,000 | 10,300 | 10,609 | 10,927 | 11,255 | 11,593 | 11,941 | 6,149 | 82,774 |
| (11) Underwriting | 555,650 | 572,320 | 589,489 | 607,174 | 625,389 | 644,151 | 663,475 | 341,690 | 4,599,337 |
| (12) Inspections | 342,351 | 352,622 | 363,200 | 374,096 | 385,319 | 396,879 | 408,785 | 210,524 | 2,833,776 |
| (13) Training & Loss Prevention Services | 12,000 | 12,360 | 12,731 | 13,113 | 13,506 | 13,911 | 14,329 | 7,379 | 99,329 |
| (14) Other Professional Expenses | 431,135 | 444,069 | 457,391 | 471,113 | 485,246 | 499,804 | 514,798 | 265,121 | 3,568,676 |
| (15) Legal Expenses | 200,000 | 206,000 | 212,180 | 218,545 | 225,102 | 231,855 | 238,810 | 122,987 | 1,655,480 |
| (16) Department of Revenue | 45,303 | 46,662 | 48,062 | 49,504 | 50,989 | 52,519 | 54,094 | 27,858 | 374,991 |
| (17) Attorney General's Office | 42,918 | 44,206 | 45,532 | 46,898 | 48,305 | 49,754 | 51,246 | 26,392 | 355,249 |
| (18) PSTIF Board/Staff | 290,700 | 299,421 | 308,404 | 317,656 | 327,185 | 337,001 | 347,111 | 178,762 | 2,406,240 |
| (19) Department of Natural Resources | 1,621,657 | 1,670,307 | 1,720,416 | 1,772,028 | 1,825,189 | 1,879,945 | 1,936,343 | 997,217 | 13,423,102 |
| (20) Total Administrative Expenses | 5,989,115 | 6,052,838 | 6,120,739 | 6,192,895 | 6,269,392 | 6,350,316 | 6,435,756 | 3,262,904 | 46,673,956 |
| Claim Payments Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (21) Average / Expected | 13,378,116 | 12,287,121 | 11,255,339 | 10,804,233 | 10,269,262 | 10,026,562 | 11,062,835 | 6,916,319 | 85,999,789 |
| (22) 50th Percentile Losses | 13,608,254 | 12,309,629 | 11,144,380 | 10,608,634 | 10,004,831 | 9,720,437 | 10,563,459 | 6,488,602 | 84,448,226 |
| (23) 75th Percentile Losses | 15,498,439 | 14,466,006 | 13,414,596 | 12,968,550 | 12,460,868 | 12,320,816 | 13,861,492 | 8,882,779 | 103,873,547 |
| (24) 90th Percentile Losses | 17,073,153 | 16,418,408 | 15,570,942 | 15,270,575 | 14,876,630 | 14,901,642 | 17,274,831 | 11,355,976 | 122,742,156 |
| (25) 95th Percentile Losses | 18,011,217 | 17,652,805 | 16,968,054 | 16,774,229 | 16,490,203 | 16,633,864 | 19,612,274 | 13,063,867 | 135,206,512 |
| (26) 99th Percentile Losses | 19,736,079 | 19,979,910 | 19,642,345 | 19,699,351 | 19,651,135 | 20,057,405 | 24,256,738 | 16,560,397 | 159,583,359 |
| (27) Cash balance @ 6/30/18 | 45,933,353 | | | | | | | | |
| Funds Available at Fiscal Year-End: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | |
| (28) Average / Expected | 40,088,122 | 35,140,876 | 31,018,971 | 27,151,612 | 23,627,186 | 20,153,893 | 15,451,478 | 11,617,789 | |
| (29) 50th Percentile | 39,857,984 | 34,888,231 | 30,877,285 | 27,205,526 | 23,945,530 | 20,778,363 | 16,575,323 | 13,169,352 | |
| (30) 75th Percentile | 37,967,799 | 30,841,669 | 24,560,507 | 18,528,832 | 12,812,798 | 7,045,251 | (455,820) | (6,255,968) | |
| (31) 90th Percentile | 36,393,085 | 27,314,553 | 18,877,046 | 10,543,346 | 2,411,550 | (5,936,822) | (16,851,232) | (25,124,578) | |
| (32) 95th Percentile | 35,455,021 | 25,142,091 | 15,307,472 | 5,470,118 | (4,275,250) | (14,355,844) | (27,607,698) | (37,588,934) | |
| (33) 99th Percentile | 33,730,159 | 21,090,125 | 8,581,215 | (4,181,261) | (17,087,561) | (30,591,697) | (48,488,015) | (61,965,781) | |

Notes: Rows (1) through (18) from Financial Projections provided by PSTIF with some minor differences due to rounding.

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

All Claim Types

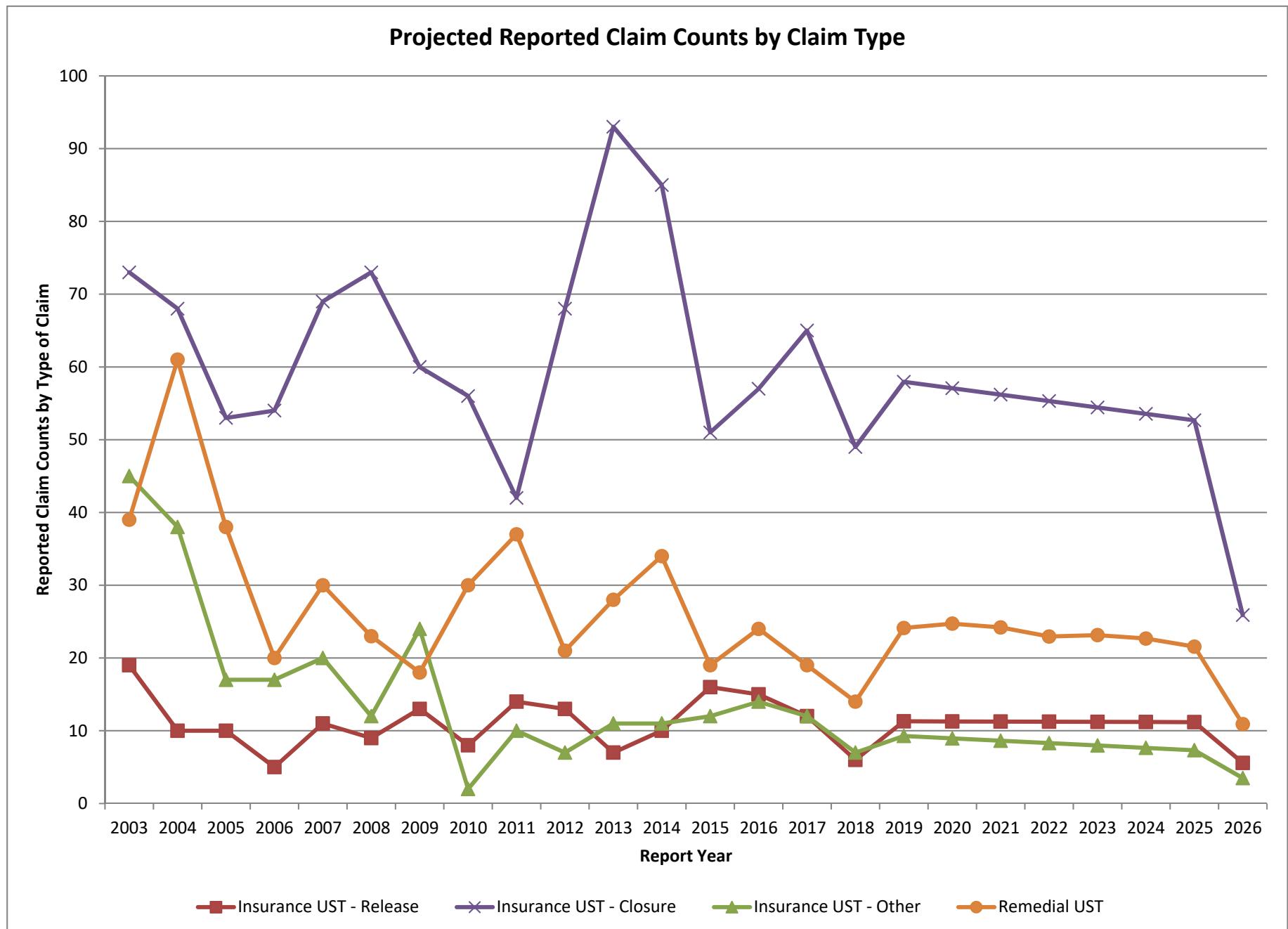
Financial Projections Based on PSTIF 2018 Projections w/Increased Activity due to Sunset, High Scenario

| (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
|--|------------|------------|------------|-------------|--------------|--------------|--------------|--------------|-------------|
| Annual Revenues Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (1) Transport load fees | 11,500,000 | 11,450,000 | 11,400,000 | 11,350,000 | 11,300,000 | 11,250,000 | 11,200,000 | 5,575,000 | 85,025,000 |
| (2) 100 Initial tank fees | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 8,500 | 127,500 |
| (3) UST participation fees | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 890,000 | 445,000 | 6,675,000 |
| (4) AST participation fees | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 330,000 | 165,000 | 2,475,000 |
| (5) Interest income | 785,000 | 705,714 | 617,173 | 542,770 | 477,227 | 416,585 | 359,177 | 152,035 | 4,055,681 |
| (6) Total Revenues | 13,522,000 | 13,392,714 | 13,254,173 | 13,129,770 | 13,014,227 | 12,903,585 | 12,796,177 | 6,345,535 | 98,358,181 |
| Administrative Expenses Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (7) Third Party Administrative Expenses | 2,265,000 | 2,219,700 | 2,175,306 | 2,131,800 | 2,089,164 | 2,047,381 | 2,006,433 | 983,152 | 15,917,936 |
| (8) Contingency & Special Projects | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 90,000 | 45,000 | 675,000 |
| (9) Office of Administration | 82,401 | 84,873 | 87,419 | 90,042 | 92,743 | 95,525 | 98,391 | 50,671 | 682,066 |
| (10) Section 319.107 Expenses | 10,000 | 10,300 | 10,609 | 10,927 | 11,255 | 11,593 | 11,941 | 6,149 | 82,774 |
| (11) Underwriting | 555,650 | 572,320 | 589,489 | 607,174 | 625,389 | 644,151 | 663,475 | 341,690 | 4,599,337 |
| (12) Inspections | 342,351 | 352,622 | 363,200 | 374,096 | 385,319 | 396,879 | 408,785 | 210,524 | 2,833,776 |
| (13) Training & Loss Prevention Services | 12,000 | 12,360 | 12,731 | 13,113 | 13,506 | 13,911 | 14,329 | 7,379 | 99,329 |
| (14) Other Professional Expenses | 431,135 | 444,069 | 457,391 | 471,113 | 485,246 | 499,804 | 514,798 | 265,121 | 3,568,676 |
| (15) Legal Expenses | 200,000 | 206,000 | 212,180 | 218,545 | 225,102 | 231,855 | 238,810 | 122,987 | 1,655,480 |
| (16) Department of Revenue | 45,303 | 46,662 | 48,062 | 49,504 | 50,989 | 52,519 | 54,094 | 27,858 | 374,991 |
| (17) Attorney General's Office | 42,918 | 44,206 | 45,532 | 46,898 | 48,305 | 49,754 | 51,246 | 26,392 | 355,249 |
| (18) PSTIF Board/Staff | 290,700 | 299,421 | 308,404 | 317,656 | 327,185 | 337,001 | 347,111 | 178,762 | 2,406,240 |
| (19) Department of Natural Resources | 1,621,657 | 1,670,307 | 1,720,416 | 1,772,028 | 1,825,189 | 1,879,945 | 1,936,343 | 997,217 | 13,423,102 |
| (20) Total Administrative Expenses | 5,989,115 | 6,052,838 | 6,120,739 | 6,192,895 | 6,269,392 | 6,350,316 | 6,435,756 | 3,262,904 | 46,673,956 |
| Claim Payments Fiscal Year: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | Totals |
| (21) Average / Expected | 13,378,116 | 12,287,121 | 11,255,339 | 10,804,233 | 10,269,262 | 10,026,562 | 12,035,177 | 8,496,136 | 88,551,947 |
| (22) 50th Percentile Losses | 13,608,254 | 12,309,629 | 11,144,380 | 10,608,634 | 10,004,831 | 9,720,437 | 11,434,471 | 7,905,357 | 86,735,992 |
| (23) 75th Percentile Losses | 15,498,439 | 14,466,006 | 13,414,596 | 12,968,550 | 12,460,868 | 12,320,816 | 15,153,938 | 11,023,631 | 107,306,845 |
| (24) 90th Percentile Losses | 17,073,153 | 16,418,408 | 15,570,942 | 15,270,575 | 14,876,630 | 14,901,642 | 19,045,040 | 14,261,951 | 127,418,340 |
| (25) 95th Percentile Losses | 18,011,217 | 17,652,805 | 16,968,054 | 16,774,229 | 16,490,203 | 16,633,864 | 21,731,309 | 16,506,576 | 140,768,257 |
| (26) 99th Percentile Losses | 19,736,079 | 19,979,910 | 19,642,345 | 19,699,351 | 19,651,135 | 20,057,405 | 27,082,387 | 21,133,668 | 166,982,280 |
| (27) Cash balance @ 6/30/18 | 45,933,353 | | | | | | | | |
| Funds Available at Fiscal Year-End: | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | |
| (28) Average / Expected | 40,088,122 | 35,140,876 | 31,018,971 | 27,151,612 | 23,627,186 | 20,153,893 | 14,479,136 | 9,065,631 | |
| (29) 50th Percentile | 39,857,984 | 34,888,231 | 30,877,285 | 27,205,526 | 23,945,530 | 20,778,363 | 15,704,312 | 10,881,586 | |
| (30) 75th Percentile | 37,967,799 | 30,841,669 | 24,560,507 | 18,528,832 | 12,812,798 | 7,045,251 | (1,748,266) | (9,689,266) | |
| (31) 90th Percentile | 36,393,085 | 27,314,553 | 18,877,046 | 10,543,346 | 2,411,550 | (5,936,822) | (18,621,442) | (29,800,762) | |
| (32) 95th Percentile | 35,455,021 | 25,142,091 | 15,307,472 | 5,470,118 | (4,275,250) | (14,355,844) | (29,726,733) | (43,150,678) | |
| (33) 99th Percentile | 33,730,159 | 21,090,125 | 8,581,215 | (4,181,261) | (17,087,561) | (30,591,697) | (51,313,664) | (69,364,701) | |

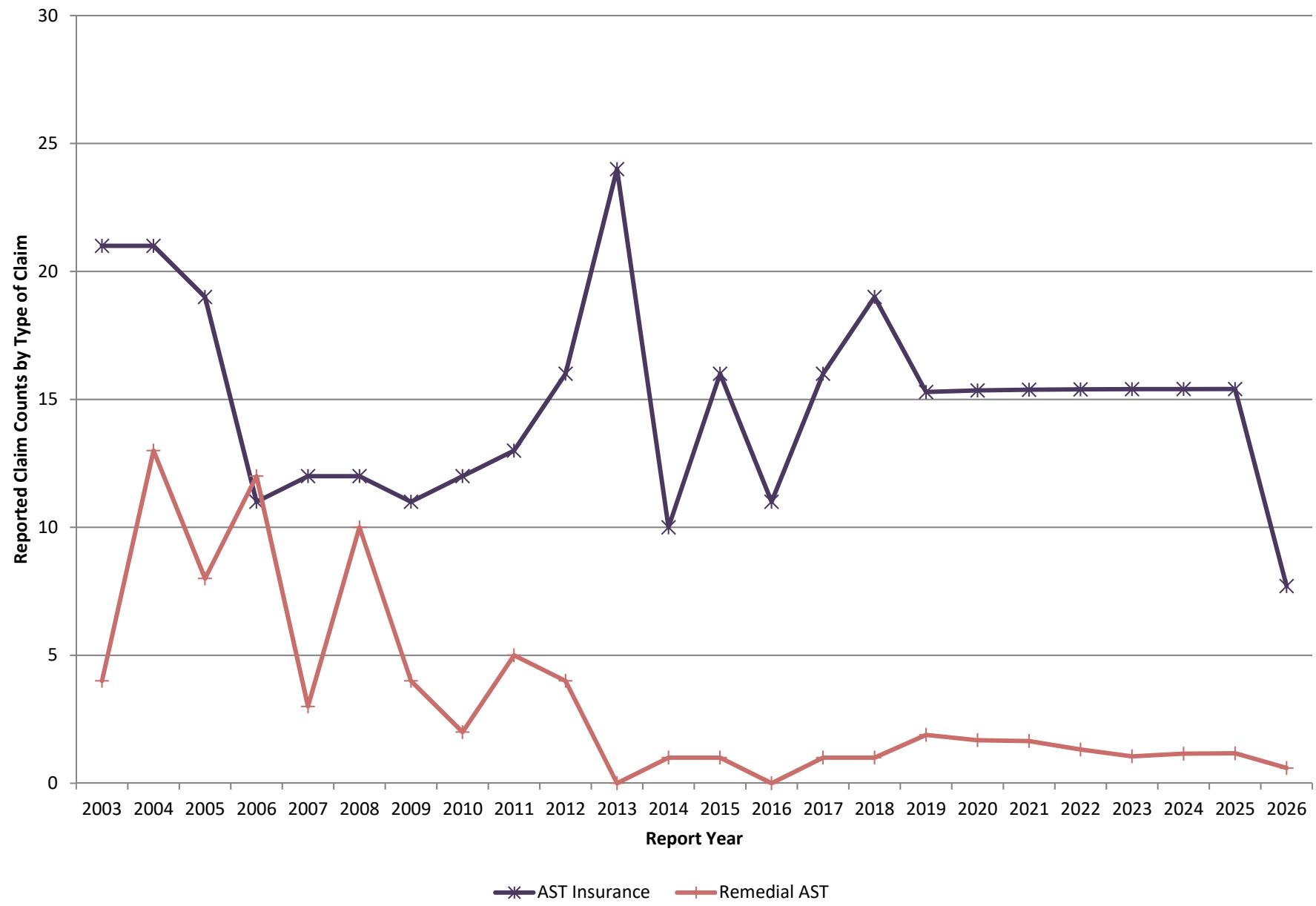
Notes: Rows (1) through (18) from Financial Projections provided by PSTIF with some minor differences due to rounding.

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 All Claim Types
 Financial Projection Cash Flow Detail

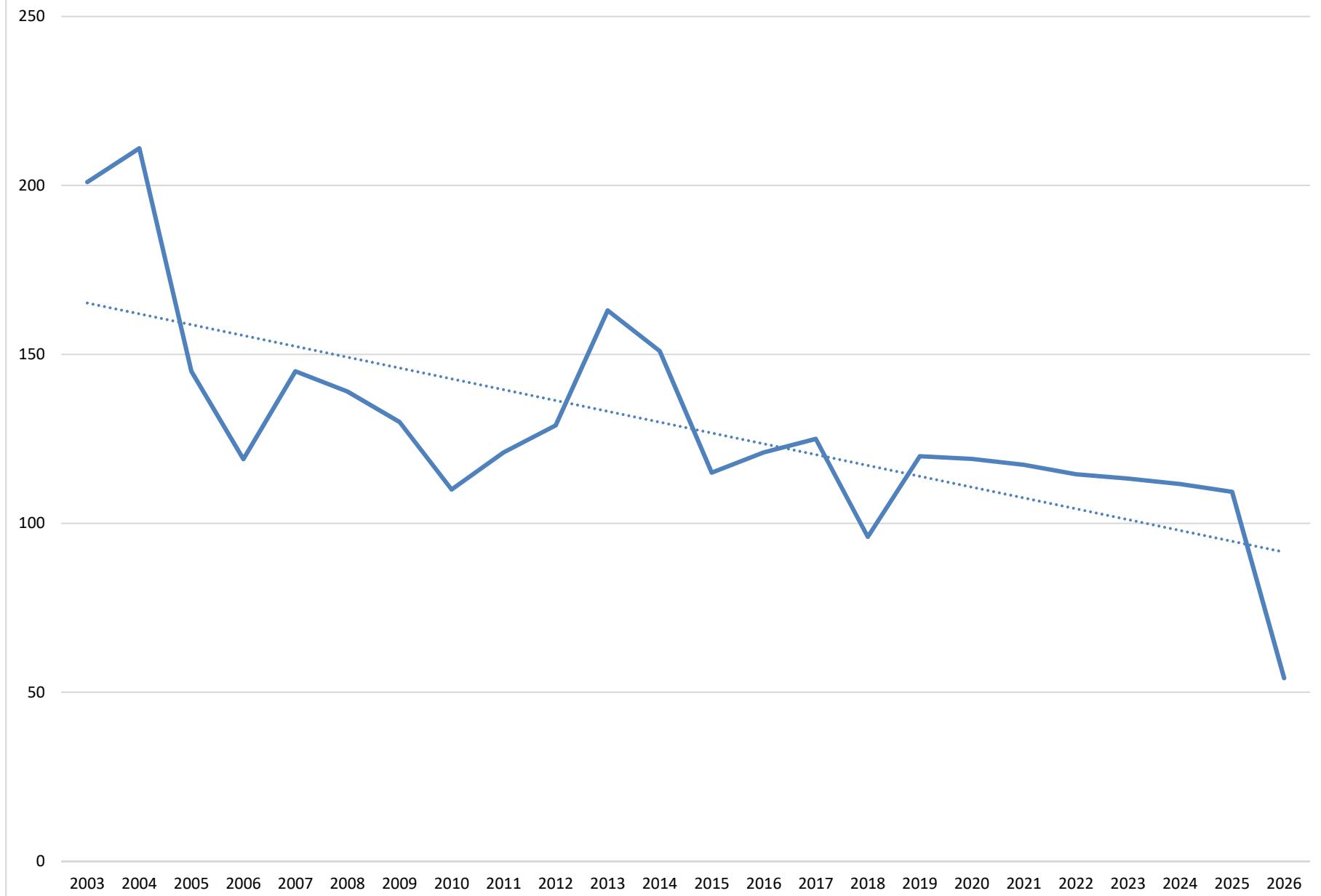
| | (A) | (B) | (C) | (D) | (E) | (F) | (G) | (H) | (I) | (J) |
|---|------------------------|------------|------------|------------|------------|------------|------------|------------|-----------|-------------|
| Claim Payments Arising from Current Reserves (Report Years 2018 and Prior) | | | | | | | | | | |
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | | Totals |
| (1) | 50th Percentile Losses | 13,133,447 | 10,530,087 | 8,625,221 | 7,593,698 | 6,550,296 | 5,911,543 | 5,190,264 | 2,343,210 | 59,877,765 |
| (2) | 75th Percentile Losses | 14,799,300 | 11,820,894 | 9,658,567 | 8,469,230 | 7,298,518 | 6,616,661 | 5,825,860 | 2,628,490 | 67,117,521 |
| (3) | 90th Percentile Losses | 16,121,259 | 12,844,988 | 10,478,991 | 9,165,773 | 7,892,340 | 7,176,243 | 6,330,913 | 2,854,791 | 72,865,299 |
| (4) | 95th Percentile Losses | 16,869,558 | 13,424,495 | 10,942,905 | 9,559,207 | 8,227,800 | 7,493,044 | 6,616,909 | 2,982,860 | 76,116,779 |
| (5) | 99th Percentile Losses | 18,258,690 | 14,493,820 | 11,799,611 | 10,287,533 | 8,846,988 | 8,074,570 | 7,140,244 | 3,217,194 | 82,118,649 |
| (6) | Mean | 12,848,284 | 10,310,327 | 8,452,170 | 7,451,819 | 6,428,010 | 5,792,083 | 5,081,083 | 2,294,117 | 58,657,893 |
| Claim Payments Arising from Future Claims (Report Years 2019 through 12/31/2025) | | | | | | | | | | |
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | | Totals |
| (7) | 50th Percentile Losses | 474,807 | 1,779,542 | 2,519,159 | 3,014,936 | 3,454,534 | 3,808,894 | 4,066,679 | 2,020,260 | 21,138,811 |
| (8) | 75th Percentile Losses | 699,139 | 2,645,112 | 3,756,029 | 4,499,320 | 5,162,350 | 5,704,155 | 6,096,963 | 3,043,010 | 31,606,079 |
| (9) | 90th Percentile Losses | 951,893 | 3,573,419 | 5,091,951 | 6,104,802 | 6,984,290 | 7,725,399 | 8,288,603 | 4,142,223 | 42,862,581 |
| (10) | 95th Percentile Losses | 1,141,659 | 4,228,310 | 6,025,149 | 7,215,022 | 8,262,403 | 9,140,820 | 9,816,812 | 4,916,942 | 50,747,117 |
| (11) | 99th Percentile Losses | 1,477,389 | 5,486,089 | 7,842,734 | 9,411,818 | 10,804,147 | 11,982,836 | 12,878,020 | 6,483,296 | 66,366,329 |
| (12) | Mean | 529,832 | 1,976,794 | 2,803,169 | 3,352,415 | 3,841,251 | 4,234,479 | 4,523,241 | 2,252,477 | 23,513,659 |
| Total Projected Claim Payments | | | | | | | | | | |
| | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 (1/2) | | Totals |
| (13) | 50th Percentile Losses | 13,608,254 | 12,309,629 | 11,144,380 | 10,608,634 | 10,004,831 | 9,720,437 | 9,256,942 | 4,363,470 | 81,016,577 |
| (14) | 75th Percentile Losses | 15,498,439 | 14,466,006 | 13,414,596 | 12,968,550 | 12,460,868 | 12,320,816 | 11,922,823 | 5,671,501 | 98,723,600 |
| (15) | 90th Percentile Losses | 17,073,153 | 16,418,408 | 15,570,942 | 15,270,575 | 14,876,630 | 14,901,642 | 14,619,517 | 6,997,014 | 115,727,880 |
| (16) | 95th Percentile Losses | 18,011,217 | 17,652,805 | 16,968,054 | 16,774,229 | 16,490,203 | 16,633,864 | 16,433,722 | 7,899,802 | 126,863,895 |
| (17) | 99th Percentile Losses | 19,736,079 | 19,979,910 | 19,642,345 | 19,699,351 | 19,651,135 | 20,057,405 | 20,018,264 | 9,700,490 | 148,484,979 |
| (18) | Mean | 13,378,116 | 12,287,121 | 11,255,339 | 10,804,233 | 10,269,262 | 10,026,562 | 9,604,324 | 4,546,594 | 82,171,552 |



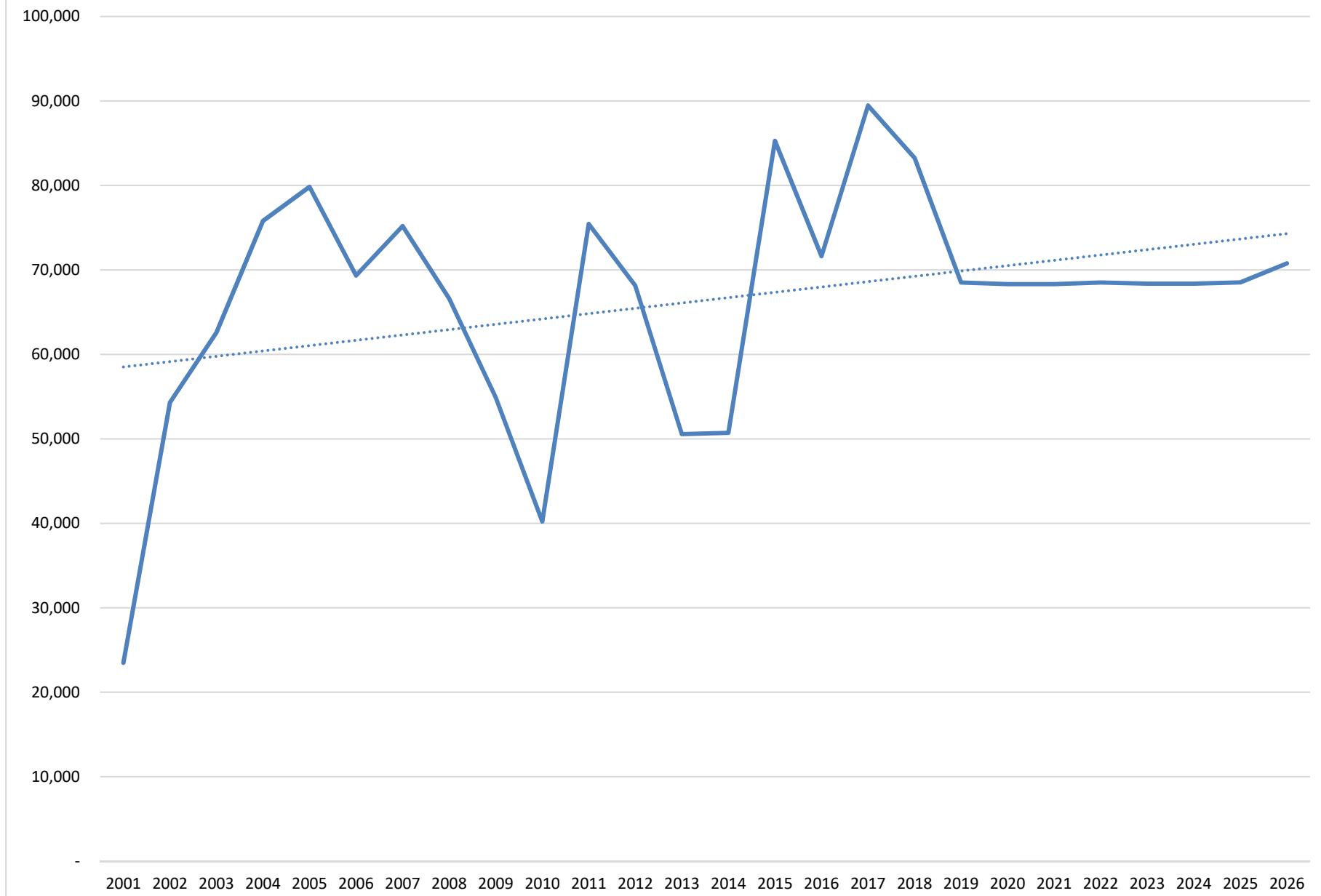
Projected Reported Claim Counts by Claim Type



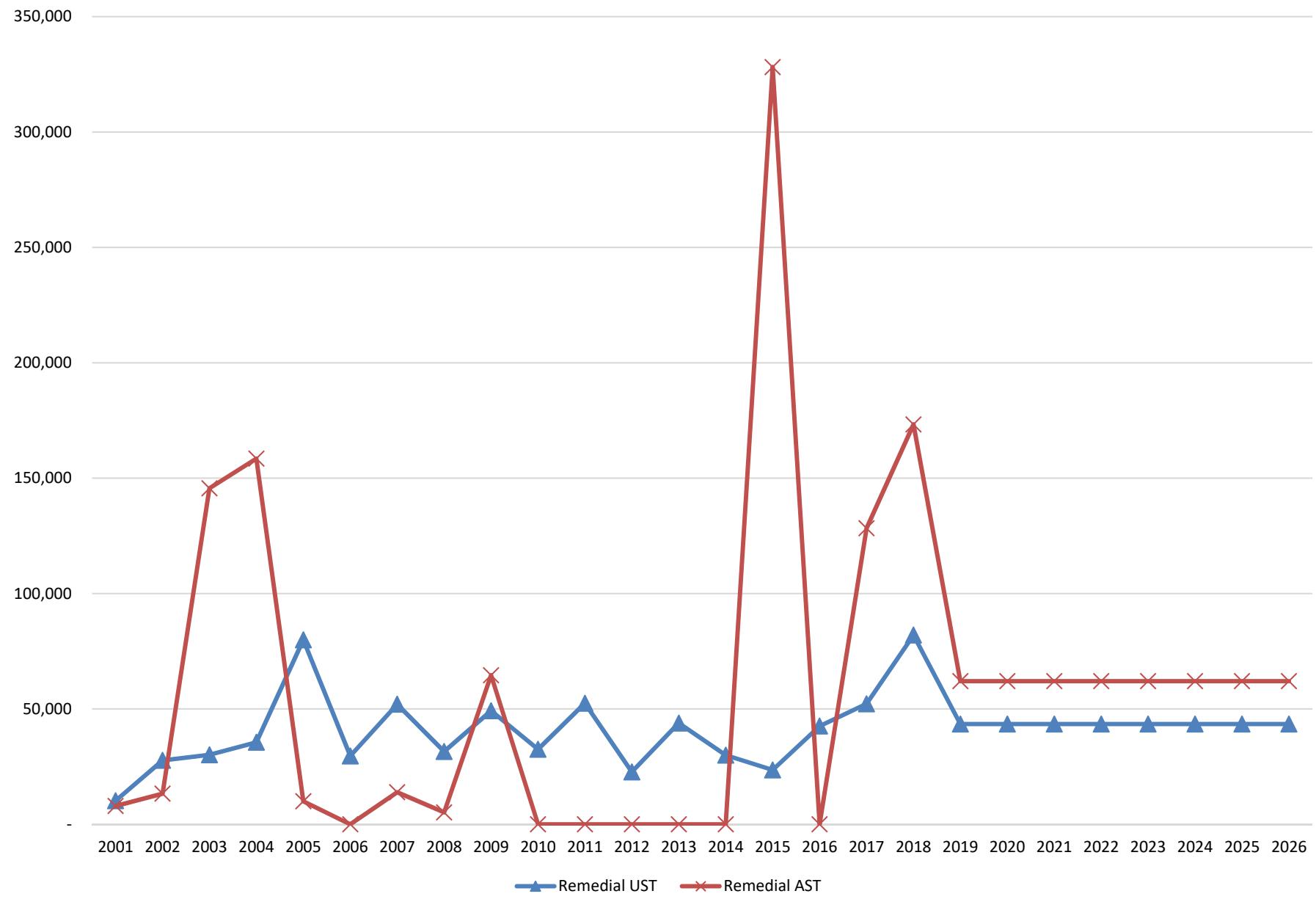
Total Claim Counts by Report Year



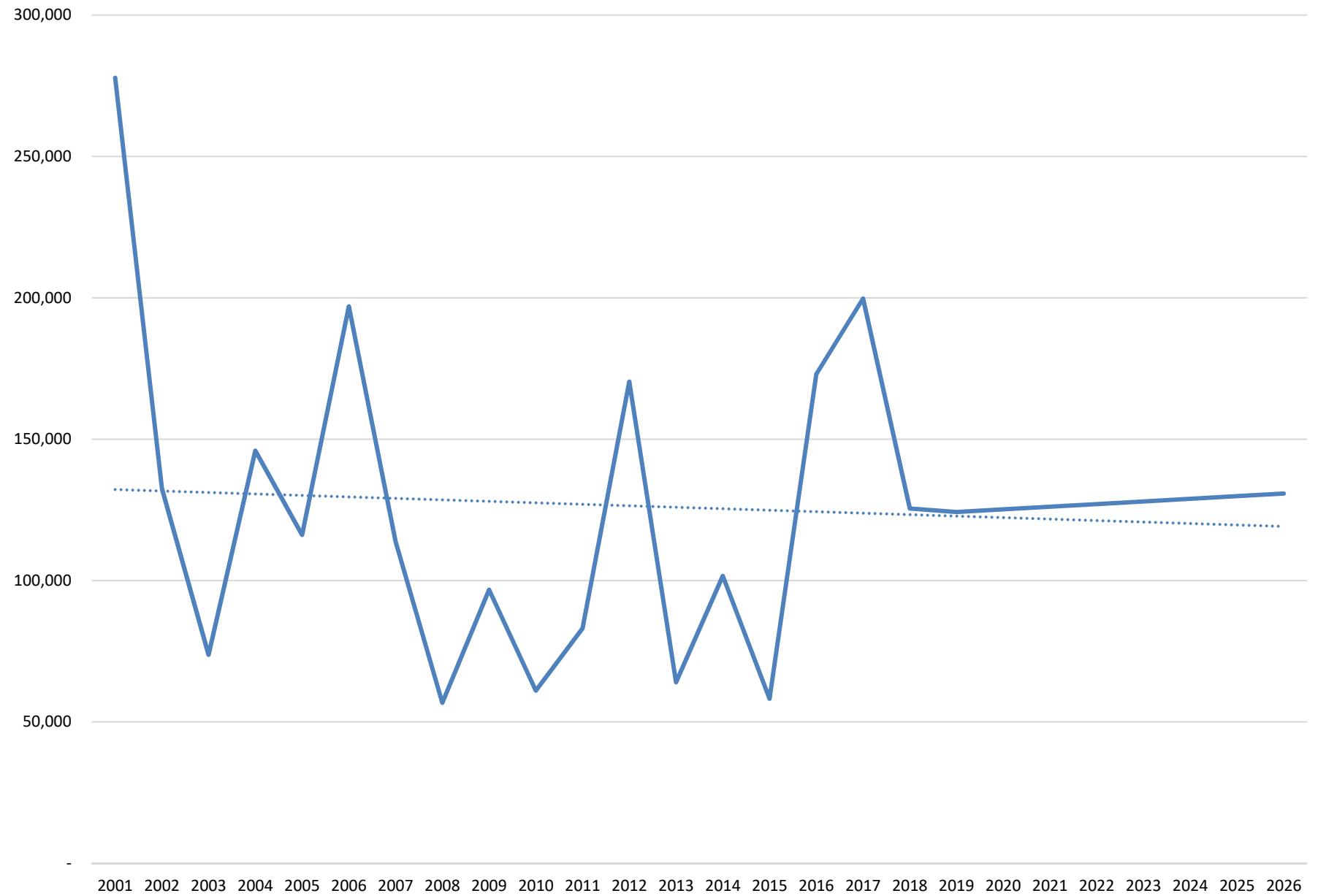
Total Average Severity by Report Year



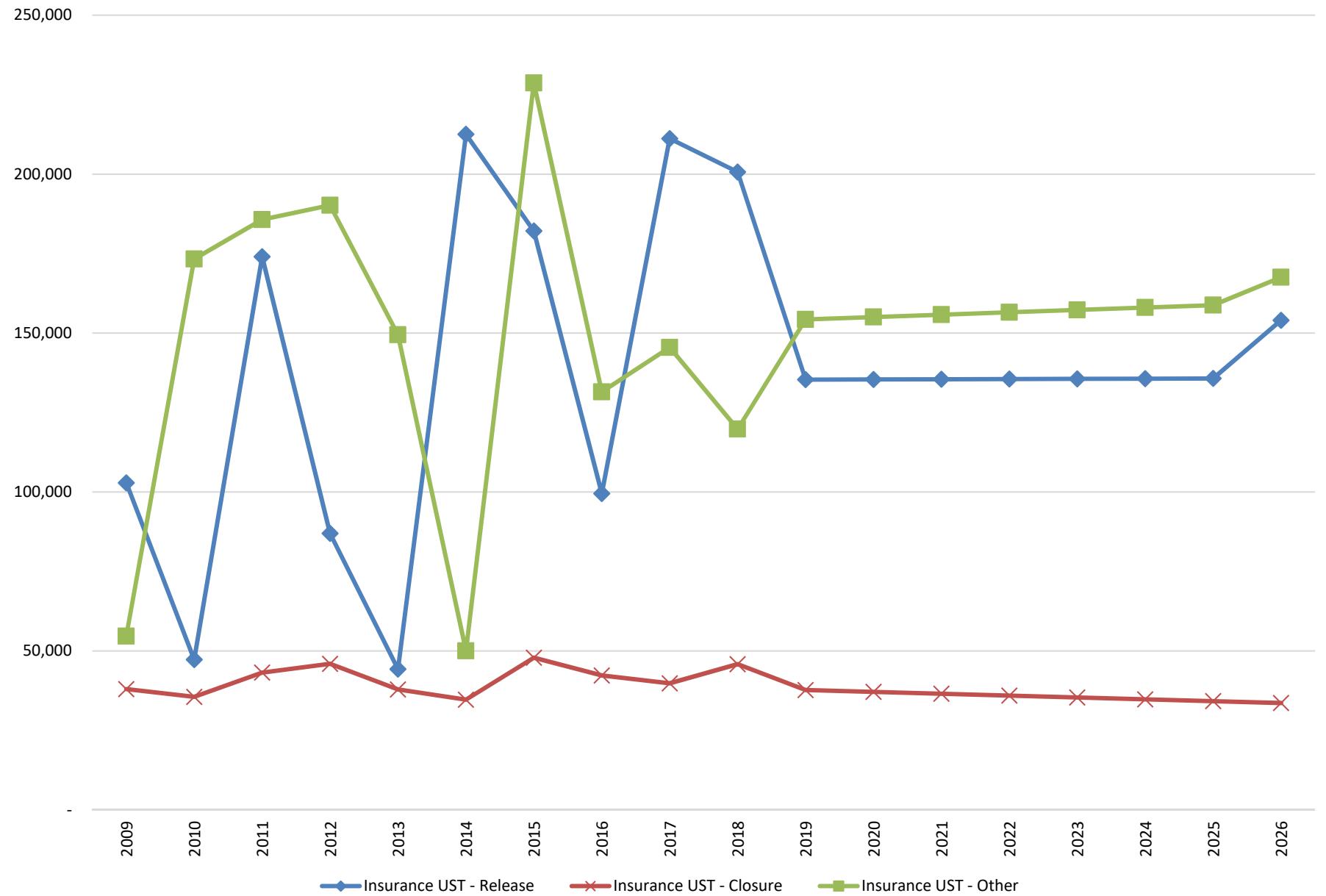
Remedial Claim Severities by Report Year



AST Insurance Severity by Report Year



UST Insurance Severities by Report Year



Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST Claims
 Projection of Future Frequencies and Severities

| (1) RY | (2) UST POLS IN FORCE | (3) REPORTED CLAIM COUNTS | | | (6) ULTIMATE LOSS SEVERITY | | | (9) ULTIMATE LOSSES | | | (11) OTHER |
|-----------|-----------------------------|---------------------------|----------------|--------------|----------------------------|----------------|--------------|---------------------|-----------------|-----------|---------------|
| | | (4) RELEASE | (5) CLOSURE | (5) OTHER | (6) RELEASE | (7) CLOSURE | (8) OTHER | (9) RELEASE | (10) CLOSURE | | |
| | | | | | | | | | | | |
| 1994 | | 3 | 15 | 56 | | | | | | | |
| 1995 | | 6 | 34 | 39 | 40,326 | 24,430 | 75,534 | 241,953 | 830,629 | 2,945,818 | |
| 1996 | | 12 | 83 | 31 | 131,597 | 46,784 | 76,783 | 1,579,163 | 3,883,098 | 2,380,279 | |
| 1997 | | 22 | 126 | 28 | 90,724 | 36,848 | 135,108 | 1,995,927 | 4,642,882 | 3,783,030 | |
| 1998 | | 19 | 161 | 38 | 72,700 | 33,311 | 80,404 | 1,381,308 | 5,363,065 | 3,055,366 | |
| 1999 | | 8 | 226 | 20 | 17,822 | 42,376 | 142,415 | 142,573 | 9,576,992 | 2,848,305 | |
| 2000 | | 26 | 90 | 59 | 85,356 | 63,505 | 67,357 | 2,219,267 | 5,715,439 | 3,974,075 | |
| 2001 | | 23 | 65 | 36 | 47,171 | 35,032 | 32,349 | 1,084,938 | 2,277,058 | 1,164,580 | |
| 2002 | | 20 | 68 | 47 | 36,354 | 65,973 | 102,097 | 727,076 | 4,486,171 | 4,798,581 | |
| 2003 | | 19 | 73 | 45 | 118,049 | 47,321 | 79,467 | 2,242,938 | 3,454,424 | 3,576,030 | |
| 2004 | | 10 | 68 | 38 | 142,036 | 35,291 | 128,424 | 1,420,364 | 2,399,803 | 4,880,095 | |
| 2005 | | 10 | 53 | 17 | 124,665 | 52,573 | 130,562 | 1,246,652 | 2,786,378 | 2,219,551 | |
| 2006 | | 5 | 54 | 17 | 46,842 | 30,273 | 213,151 | 234,210 | 1,634,727 | 3,623,565 | |
| 2007 | | 11 | 69 | 20 | 260,925 | 58,021 | 53,108 | 2,870,172 | 4,003,475 | 1,062,164 | |
| 2008 | 2,664 | 9 | 73 | 12 | 241,243 | 42,905 | 208,124 | 2,171,186 | 3,132,091 | 2,497,484 | |
| 2009 | 2,662 | 13 | 60 | 24 | 102,882 | 37,986 | 54,644 | 1,337,464 | 2,279,162 | 1,311,453 | |
| 2010 | 2,622 | 8 | 56 | 2 | 47,263 | 35,558 | 173,298 | 378,102 | 1,991,260 | 346,596 | |
| 2011 | 2,623 | 14 | 42 | 10 | 174,046 | 43,186 | 185,690 | 2,436,639 | 1,813,826 | 1,856,897 | |
| 2012 | 2,617 | 13 | 68 | 7 | 86,972 | 45,954 | 190,214 | 1,130,634 | 3,124,869 | 1,331,501 | |
| 2013 | 2,603 | 7 | 93 | 11 | 44,256 | 37,882 | 149,454 | 309,791 | 3,523,009 | 1,643,996 | |
| 2014 | 2,573 | 10 | 85 | 11 | 212,527 | 34,663 | 50,024 | 2,125,274 | 2,946,370 | 550,266 | |
| 2015 | 2,530 | 16 | 51 | 12 | 182,130 | 47,874 | 228,687 | 2,914,088 | 2,441,555 | 2,744,243 | |
| 2016 | 2,509 | 15 | 57 | 14 | 99,517 | 42,275 | 131,479 | 1,492,761 | 2,409,675 | 1,840,713 | |
| 2017 | 2,489 | 12 | 65 | 12 | 211,182 | 39,798 | 145,466 | 2,534,186 | 2,586,852 | 1,745,586 | |
| 2018 | 2,487 | 6 | 49 | 7 | 200,686 | 45,834 | 119,785 | 1,204,117 | 2,245,872 | 838,492 | |
| 2019 | 2,451 | 11 | 58 | 9 | 135,349 | 37,699 | 154,288 | 1,529,415 | 2,184,974 | 1,431,836 | |
| 2020 | 2,428 | 11 | 57 | 9 | 135,411 | 37,114 | 155,036 | 1,527,543 | 2,118,422 | 1,388,207 | |
| 2021 | 2,406 | 11 | 56 | 9 | 135,473 | 36,530 | 155,784 | 1,525,670 | 2,052,898 | 1,344,091 | |
| 2022 | 2,383 | 11 | 55 | 8 | 135,535 | 35,945 | 156,532 | 1,523,794 | 1,988,404 | 1,299,486 | |
| 2023 | 2,360 | 11 | 54 | 8 | 135,597 | 35,361 | 157,279 | 1,521,915 | 1,924,939 | 1,254,394 | |
| 2024 | 2,337 | 11 | 54 | 8 | 135,659 | 34,776 | 158,027 | 1,520,035 | 1,862,504 | 1,208,814 | |
| 2025 | 2,314 | 11 | 53 | 7 | 135,721 | 34,192 | 158,775 | 1,518,152 | 1,801,097 | 1,162,746 | |
| 2026 | 2,291 | 6 | 26 | 3 | 154,030 | 33,607 | 167,545 | 860,011 | 870,360 | 586,159 | |

Notes: Future RYs for Cols (2), (6), (7), and (8) are linearly interpolated against report year.

Future RYs for Cols (3), (4), and (5) are linearly interpolated against Col (2).

Col (9) = (3) x (6); Col (10) = (4) x (7); Col (11) = (5) x (8).

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST Claims
 Projection of Future Frequencies and Severities

| (1) <u>RY</u> | (2) <u>AST POLS IN FORCE</u> | (3) <u>REPORTED CLAIMS</u> | (4) <u>ULTIMATE SEVERITY</u> | (5) <u>ULTIMATE LOSS</u> |
|------------------|-------------------------------------|-----------------------------------|-------------------------------------|---------------------------------|
| 1994 | | | - | - |
| 1995 | | | - | - |
| 1996 | | | - | - |
| 1997 | | | - | - |
| 1998 | | 1 | 478,042 | 478,042 |
| 1999 | | 7 | 384,176 | 2,689,230 |
| 2000 | | 13 | 91,984 | 1,195,793 |
| 2001 | | 24 | 277,825 | 6,667,797 |
| 2002 | | 18 | 132,566 | 2,386,183 |
| 2003 | | 21 | 73,729 | 1,548,303 |
| 2004 | | 21 | 145,951 | 3,064,971 |
| 2005 | | 19 | 116,139 | 2,206,643 |
| 2006 | | 11 | 196,992 | 2,166,914 |
| 2007 | | 12 | 113,771 | 1,365,248 |
| 2008 | 517 | 12 | 56,767 | 681,208 |
| 2009 | 563 | 11 | 96,762 | 1,064,378 |
| 2010 | 578 | 12 | 61,064 | 732,765 |
| 2011 | 810 | 13 | 83,045 | 1,079,586 |
| 2012 | 975 | 16 | 170,361 | 2,725,771 |
| 2013 | 1,003 | 24 | 64,038 | 1,536,904 |
| 2014 | 1,030 | 10 | 101,654 | 1,016,535 |
| 2015 | 1,021 | 16 | 58,189 | 931,030 |
| 2016 | 1,010 | 11 | 173,010 | 1,903,113 |
| 2017 | 1,005 | 16 | 199,759 | 3,196,149 |
| 2018 | 999 | 19 | 125,468 | 2,383,894 |
| 2019 | 1,013 | 15 | 124,243 | 1,899,755 |
| 2020 | 1,020 | 15 | 125,176 | 1,921,320 |
| 2021 | 1,023 | 15 | 126,110 | 1,939,323 |
| 2022 | 1,025 | 15 | 127,044 | 1,955,530 |
| 2023 | 1,026 | 15 | 127,977 | 1,970,834 |
| 2024 | 1,026 | 15 | 128,911 | 1,985,682 |
| 2025 | 1,027 | 15 | 129,845 | 2,000,301 |
| 2026 | 1,027 | 8 | 130,779 | 1,007,402 |

Notes: Future RYs for Col (2) are increased by a decreasing percentage to a maximum of 1,028 based on assumptions from PSTIF.

Future RYs for Col (3) are linearly interpolated against Col (2).

Col (5) = (3) x (4).

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Remedial Claims

Projection of Future Frequencies and Severities

| (1) | (2) | | (3) | | (4) | | (5) | | (6) | | (7) | | (8) | | (9) | | (10) | | (11) | |
|------|-----------------|-------|-----------------------|-----|-------|-------|---------|---------|------------|-----------|-----|-----|---------------|-----|----------|-----|------|-----|------|-----|
| | POTENTIAL SITES | | REPORTED CLAIM COUNTS | | UST | | AST | | UST | | AST | | ULTIMATE LOSS | | SEVERITY | | UST | | AST | |
| RY | UST | AST | UST | AST | UST | AST | UST | AST | UST | AST | UST | AST | UST | AST | UST | AST | UST | AST | UST | AST |
| 1994 | 15,480 | 2,403 | - | - | 0.01% | 0.04% | 114,027 | 106,826 | 114,027 | 106,826 | | | | | | | | | | |
| 1995 | 15,479 | 2,402 | 1 | 1 | 8.49% | 0.12% | 51,612 | 36,485 | 67,818,570 | 109,456 | | | | | | | | | | |
| 1996 | 14,166 | 2,399 | 1,314 | 3 | 1.51% | 0.00% | 40,702 | - | 8,710,315 | - | | | | | | | | | | |
| 1997 | 13,952 | 2,399 | 214 | - | 2.29% | 0.50% | 60,037 | 52,924 | 19,151,801 | 635,093 | | | | | | | | | | |
| 1998 | 13,633 | 2,387 | 319 | 12 | 2.77% | 0.46% | 21,830 | 136,435 | 8,251,760 | 1,500,783 | | | | | | | | | | |
| 1999 | 13,255 | 2,376 | 378 | 11 | 4.21% | 2.10% | 26,860 | 107,532 | 14,987,967 | 5,376,624 | | | | | | | | | | |
| 2000 | 12,696 | 2,327 | 558 | 50 | 2.69% | 8.77% | 10,190 | 7,949 | 3,485,098 | 1,621,524 | | | | | | | | | | |
| 2001 | 12,354 | 2,123 | 342 | 204 | 0.32% | 0.19% | 27,703 | 13,305 | 3,490,517 | 239,493 | | | | | | | | | | |
| 2002 | 12,228 | 2,105 | 126 | 18 | 0.17% | 0.58% | 29,600 | - | 592,007 | - | | | | | | | | | | |
| 2003 | 12,189 | 2,101 | 39 | 4 | 0.50% | 0.62% | 79,935 | 9,980 | 3,037,513 | 79,838 | | | | | | | | | | |
| 2004 | 12,129 | 2,088 | 61 | 13 | 0.31% | 0.38% | 52,030 | 13,917 | 1,560,892 | 41,750 | | | | | | | | | | |
| 2005 | 12,091 | 2,080 | 38 | 8 | 0.19% | 0.48% | 31,535 | 5,179 | 725,305 | 51,787 | | | | | | | | | | |
| 2006 | 12,073 | 2,068 | 20 | 12 | 0.15% | 0.10% | 49,201 | 64,606 | 885,617 | 258,423 | | | | | | | | | | |
| 2007 | 12,043 | 2,065 | 30 | 3 | 0.25% | 0.15% | 32,513 | - | 975,390 | - | | | | | | | | | | |
| 2008 | 12,021 | 2,055 | 23 | 10 | 0.19% | 0.18% | 22,691 | - | 476,515 | - | | | | | | | | | | |
| 2009 | 12,003 | 2,051 | 18 | 4 | 0.15% | 0.19% | 43,841 | - | 1,227,539 | - | | | | | | | | | | |
| 2010 | 11,973 | 2,049 | 30 | 2 | 0.25% | 0.24% | 29,964 | - | 1,018,773 | - | | | | | | | | | | |
| 2011 | 11,936 | 2,044 | 37 | 5 | 0.31% | 0.20% | 23,542 | 328,150 | 447,294 | 328,150 | | | | | | | | | | |
| 2012 | 11,915 | 2,040 | 21 | 4 | 0.18% | 0.05% | 43,444 | 62,041 | 1,048,028 | 117,234 | | | | | | | | | | |
| 2013 | 11,887 | 2,040 | 28 | - | 0.23% | 0.06% | 43,444 | 62,041 | 1,074,015 | 104,273 | | | | | | | | | | |
| 2014 | 11,853 | 2,039 | 34 | 1 | 0.29% | 0.05% | 43,444 | 62,041 | 1,051,585 | 102,310 | | | | | | | | | | |
| 2015 | 11,834 | 2,038 | 19 | 1 | 0.16% | 0.05% | 43,444 | 62,041 | 997,226 | 81,705 | | | | | | | | | | |
| 2016 | 11,810 | 2,038 | 24 | - | 0.20% | 0.00% | 43,444 | - | 1,005,515 | 65,177 | | | | | | | | | | |
| 2017 | 11,791 | 2,037 | 19 | 1 | 0.16% | 0.05% | 43,444 | 62,041 | 984,858 | 71,657 | | | | | | | | | | |
| 2018 | 11,777 | 2,036 | 14 | 1 | 0.12% | 0.05% | 43,444 | 62,041 | 936,657 | 72,613 | | | | | | | | | | |
| 2019 | 11,753 | 2,034 | 24 | 2 | 0.20% | 0.09% | 43,444 | 62,041 | 473,769 | 36,832 | | | | | | | | | | |
| 2020 | 11,728 | 2,032 | 25 | 2 | 0.21% | 0.08% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |
| 2021 | 11,704 | 2,031 | 24 | 2 | 0.21% | 0.08% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |
| 2022 | 11,681 | 2,029 | 23 | 1 | 0.20% | 0.06% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |
| 2023 | 11,658 | 2,028 | 23 | 1 | 0.20% | 0.05% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |
| 2024 | 11,635 | 2,027 | 23 | 1 | 0.19% | 0.06% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |
| 2025 | 11,614 | 2,026 | 22 | 1 | 0.19% | 0.06% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |
| 2026 | 11,603 | 2,025 | 11 | 1 | 0.09% | 0.03% | 43,444 | 62,041 | 43,444 | 62,041 | | | | | | | | | | |

Notes: Future RYs for Cols (2) and (3) are [prior year sites] x (1 - [% reported from col (6) or (7)])

Future RYs for Cols (4) and (5) are the change in Cols (2) and (3), respectively.

Future RYs for Cols (6) and (7) are rolling average of prior 10 years.

Future RYs for Cols (8) and (9) are long-term averages from 1995-2018

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 All Claim Types
 Cash Flow Summary

| UNDISCOUNTED VALUE OF CURRENT RESERVES - PAYMENT STREAM | | | | | | | | | | | |
|---|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Category | Total | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | After 2027 |
| Insurance UST - Release | 11,866,745 | 1,838,008 | 1,497,017 | 1,183,730 | 948,946 | 927,318 | 825,469 | 659,544 | 656,253 | 651,920 | 2,678,540 |
| Insurance UST - Closure | 15,601,657 | 2,904,726 | 1,971,767 | 1,583,375 | 1,372,229 | 1,114,891 | 962,410 | 807,420 | 720,731 | 629,948 | 3,534,161 |
| Insurance UST - Other | 15,726,672 | 2,441,217 | 2,008,736 | 1,661,706 | 1,554,590 | 1,288,488 | 1,068,481 | 884,049 | 813,495 | 706,200 | 3,299,710 |
| Remedial UST | 23,809,166 | 3,188,456 | 2,932,354 | 2,495,852 | 2,346,134 | 2,038,194 | 1,898,491 | 1,682,613 | 1,450,389 | 1,231,538 | 4,545,146 |
| Insurance AST | 13,478,673 | 1,807,156 | 1,436,787 | 1,214,005 | 1,029,222 | 911,219 | 806,584 | 807,147 | 750,446 | 684,821 | 4,031,285 |
| Remedial AST | 2,988,146 | 612,726 | 418,806 | 276,761 | 168,295 | 119,954 | 205,600 | 218,453 | 177,116 | 158,297 | 632,138 |
| Total | 83,471,060 | 12,792,289 | 10,265,468 | 8,415,429 | 7,419,416 | 6,400,064 | 5,767,035 | 5,059,225 | 4,568,430 | 4,062,724 | 18,720,980 |
| Percent of Current Total | | | | | | | | | | | |
| Paid by Year - Undiscounted | 100.0% | 15.3% | 12.3% | 10.1% | 8.9% | 7.7% | 6.9% | 6.1% | 5.5% | 4.9% | 22.4% |
| DISCOUNTED VALUE OF CURRENT RESERVES - PAYMENT STREAM | | | | | | | | | | | |
| Category | Total | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | After 2027 |
| Insurance UST - Release | 10,841,003 | 1,823,113 | 1,460,914 | 1,136,535 | 896,403 | 861,832 | 754,791 | 593,337 | 580,846 | 567,697 | 2,165,536 |
| Insurance UST - Closure | 14,279,417 | 2,881,185 | 1,924,215 | 1,520,245 | 1,296,249 | 1,036,159 | 880,007 | 726,369 | 637,915 | 548,563 | 2,828,509 |
| Insurance UST - Other | 14,408,288 | 2,421,433 | 1,960,292 | 1,595,453 | 1,468,513 | 1,197,497 | 976,996 | 795,306 | 720,020 | 614,964 | 2,657,814 |
| Remedial UST | 21,804,491 | 3,162,616 | 2,861,636 | 2,396,342 | 2,216,230 | 1,894,259 | 1,735,939 | 1,513,708 | 1,283,732 | 1,072,432 | 3,667,597 |
| Insurance AST | 12,108,383 | 1,792,510 | 1,402,137 | 1,165,603 | 972,235 | 846,870 | 737,523 | 726,124 | 664,216 | 596,347 | 3,204,818 |
| Remedial AST | 2,750,457 | 607,760 | 408,706 | 265,726 | 158,977 | 111,483 | 187,996 | 196,524 | 156,765 | 137,847 | 518,674 |
| Total | 76,192,039 | 12,688,616 | 10,017,901 | 8,079,904 | 7,008,606 | 5,948,100 | 5,273,252 | 4,551,368 | 4,043,494 | 3,537,849 | 15,042,947 |
| Percent of Current Total | | | | | | | | | | | |
| Paid by Year - Discounted | 100.0% | 16.7% | 13.1% | 10.6% | 9.2% | 7.8% | 6.9% | 6.0% | 5.3% | 4.6% | 19.7% |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

All Claim Types

ALAE Provision

| (1) RY | (2) PAID LOSS | (3) INCURRED LOSS | (4) PAID ALAE | (5) ALAE PER \$10K PAID LOSS | (6) CASE RESERVE | (7) IBNR | (8) ALAE UNPAID | (9) ULTIMATE ALAE |
|-----------------|---------------------|-------------------------|---------------------|------------------------------------|----------------------------|-------------|-----------------------|-------------------------|
| 1994 | 3,840,951 | 4,145,291 | 6,407 | 16.68 | 304,340 | 15,113 | 2,097 | 8,504 |
| 1995 | 4,157,462 | 4,210,487 | 9,365 | 22.53 | 53,025 | 28,766 | 537 | 9,902 |
| 1996 | 68,084,197 | 75,063,252 | 129,990 | 19.09 | 6,979,055 | 707,314 | 50,451 | 180,441 |
| 1997 | 18,082,067 | 19,005,008 | 42,182 | 23.33 | 922,940 | 127,147 | 6,892 | 49,075 |
| 1998 | 26,735,480 | 29,800,864 | 82,848 | 30.99 | 3,065,383 | 263,811 | 21,852 | 104,700 |
| 1999 | 23,225,460 | 24,699,219 | 75,330 | 32.43 | 1,473,758 | 310,423 | 11,711 | 87,041 |
| 2000 | 28,362,415 | 33,273,137 | 84,218 | 29.69 | 4,910,722 | 196,029 | 33,519 | 117,737 |
| 2001 | 13,112,484 | 16,154,987 | 52,749 | 40.23 | 3,042,503 | 146,008 | 20,928 | 73,677 |
| 2002 | 13,376,817 | 15,531,007 | 47,655 | 35.62 | 2,154,190 | 597,014 | 18,058 | 65,713 |
| 2003 | 10,229,919 | 11,995,739 | 54,630 | 53.40 | 1,765,819 | 582,616 | 15,414 | 70,045 |
| 2004 | 13,177,394 | 14,728,992 | 136,523 | 103.60 | 1,551,598 | 1,264,097 | 18,481 | 155,004 |
| 2005 | 8,915,837 | 10,825,449 | 108,280 | 121.45 | 1,909,612 | 751,126 | 17,464 | 125,744 |
| 2006 | 6,204,347 | 7,468,420 | 62,866 | 101.33 | 1,264,072 | 783,003 | 13,436 | 76,303 |
| 2007 | 8,801,198 | 9,648,495 | 97,508 | 110.79 | 847,297 | 1,255,207 | 13,800 | 111,308 |
| 2008 | 7,161,589 | 8,338,369 | 38,915 | 54.34 | 1,176,780 | 920,691 | 13,767 | 52,682 |
| 2009 | 5,060,502 | 6,136,229 | 29,082 | 57.47 | 1,075,727 | 1,000,268 | 13,626 | 42,708 |
| 2010 | 2,829,476 | 3,979,800 | 27,591 | 97.51 | 1,150,325 | 444,313 | 10,467 | 38,058 |
| 2011 | 5,679,153 | 7,877,099 | 30,898 | 54.41 | 2,197,946 | 1,250,597 | 22,635 | 53,534 |
| 2012 | 5,411,516 | 7,504,463 | 31,513 | 58.23 | 2,092,946 | 1,284,828 | 22,171 | 53,684 |
| 2013 | 5,023,032 | 6,619,698 | 27,062 | 53.88 | 1,596,666 | 1,621,540 | 21,123 | 48,186 |
| 2014 | 3,660,548 | 6,304,334 | 24,530 | 67.01 | 2,643,786 | 1,352,884 | 26,233 | 50,763 |
| 2015 | 4,973,053 | 7,177,048 | 40,547 | 81.53 | 2,203,996 | 2,629,310 | 31,724 | 72,272 |
| 2016 | 2,867,384 | 6,043,788 | 17,550 | 61.20 | 3,176,403 | 2,623,554 | 38,069 | 55,619 |
| 2017 | 2,939,088 | 8,012,948 | 23,550 | 80.13 | 5,073,860 | 3,170,007 | 54,110 | 77,660 |
| 2018 | 480,906 | 3,941,348 | 11,259 | 234.12 | 3,460,441 | 4,052,198 | 49,311 | 60,570 |
| TOTAL ALL YEARS | 292,392,274 | 348,485,468 | 1,293,047 | 44.22 | 56,093,194 | 27,377,866 | 547,880 | 1,840,928 |
| | | | | | Wtd. Average 2008-2016 | 62.74 | | |
| | | | | | Wtd. Average 2008-2018 | 65.64 | | |
| | | | | | Straight Average All Years | 65.64 | | |
| | | | | | Weighted Average All Years | 44.22 | | |
| | | | | | SELECTED RATIO | 65.64 | | |

Notes:

Col (5) = (4) / (3) x 10,000

Col (8) = [(6) + (7)] x Selected Ratio / 10,000

Col (9) = (8) + (4)

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 All Claim Types
 ULAE Provision

| (1) FISCAL YEAR | (2) TPA TOTAL FEES | (3) FY PAID LOSS | (4) AVERAGE FEES PER CY PAID |
|-----------------------|--------------------------|---|---------------------------------------|
| 2004 | 2,451,360 | 13,739,514 | 0.178 |
| 2005 | 2,777,240 | 13,395,111 | 0.207 |
| 2006 | 2,895,762 | 12,847,713 | 0.225 |
| 2007 | 3,087,143 | 12,185,369 | 0.253 |
| 2008 | 3,124,118 | 15,806,387 | 0.198 |
| 2009 | 3,456,283 | 16,148,518 | 0.214 |
| 2010 | 3,289,570 | 14,134,856 | 0.233 |
| 2011 | 3,185,415 | 11,632,025 | 0.274 |
| 2012 | 3,188,828 | 12,461,529 | 0.256 |
| 2013 | 3,043,682 | 10,845,847 | 0.281 |
| 2014 | 3,116,377 | 10,116,592 | 0.308 |
| 2015 | 3,207,502 | 12,588,056 | 0.255 |
| 2016 | 3,255,111 | 13,762,021 | 0.237 |
| 2017 | 3,325,325 | 15,115,087 | 0.220 |
| 2018 | 2,918,491 | 13,127,399 | 0.243 |
| Total | 46,322,208 | 197,906,025 | 0.234 |
| | | (7) 3-Year Average | 0.233 |
| | | (8) 5-Year Average | 0.252 |
| | | (9) 10-Year ex. Hi/Lo | 0.250 |
| | | (10) Selected | 0.250 |
| | | (11) [Case O/S + IBNR] x 70% | 58,429,742 |
| | | (12) ULAE IBNR = (10) x (11) | 14,585,282 |
| | | (13) Discount | 1,271,897 |
| | | (14) Discounted ULAE IBNR = (12) - (13) | 13,313,386 |

Note: Total row in Column (4) reflects a weighted average.
 FY 2018 value in Column (4) is adjusted to reflect a full year of data.

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Release
 Summary of Paid Development Method

| (1) RY | (2) PAID LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|--------------|-----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | 246,661 | 246,661 | 246,661 | - | - | - |
| 1995 | 241,953 | 241,953 | 241,953 | - | - | - |
| 1996 | 1,570,163 | 1,155,906 | 1,570,163 | 423,257 | - | 423,257 |
| 1997 | 1,995,927 | 1,995,927 | 1,995,927 | - | - | - |
| 1998 | 1,381,308 | 1,296,308 | 1,381,308 | 85,000 | - | 85,000 |
| 1999 | 142,573 | 142,573 | 142,573 | - | - | - |
| 2000 | 2,219,267 | 1,724,971 | 2,219,267 | 494,297 | - | 494,297 |
| 2001 | 1,081,236 | 996,294 | 1,081,236 | 84,942 | - | 84,942 |
| 2002 | 719,666 | 616,509 | 719,666 | 103,156 | - | 103,156 |
| 2003 | 2,190,077 | 1,645,324 | 2,190,077 | 544,753 | - | 544,753 |
| 2004 | 1,353,628 | 1,094,026 | 1,353,628 | 259,602 | - | 259,602 |
| 2005 | 1,160,547 | 844,136 | 1,160,547 | 316,412 | - | 316,412 |
| 2006 | 213,084 | 140,820 | 213,084 | 72,264 | - | 72,264 |
| 2007 | 2,961,632 | 2,297,257 | 2,488,778 | 191,520 | 472,851 | 664,371 |
| 2008 | 2,365,876 | 1,780,630 | 2,052,177 | 271,547 | 313,699 | 585,246 |
| 2009 | 1,240,247 | 743,523 | 1,240,247 | 496,725 | - | 496,725 |
| 2010 | 368,719 | 245,727 | 316,478 | 70,751 | 52,242 | 122,993 |
| 2011 | 2,859,924 | 1,793,765 | 2,064,707 | 270,942 | 795,217 | 1,066,159 |
| 2012 | 1,130,634 | 673,028 | 914,659 | 241,631 | 215,975 | 457,606 |
| 2013 | 294,002 | 162,643 | 231,563 | 68,924 | 62,439 | 131,360 |
| 2014 | 2,272,026 | 1,088,861 | 1,573,979 | 485,118 | 698,111 | 1,183,229 |
| 2015 | 3,703,062 | 1,569,832 | 2,292,174 | 722,342 | 1,410,888 | 2,133,230 |
| 2016 | 1,253,068 | 435,421 | 971,174 | 535,753 | 281,894 | 817,647 |
| 2017 | 3,540,070 | 851,011 | 1,479,562 | 628,551 | 2,060,508 | 2,689,059 |
| 2018 | 849,434 | 17,593 | 316,002 | 298,409 | 533,432 | 831,841 |
| TOTAL | 37,363,846 | 23,800,698 | 30,466,590 | 6,665,892 | 6,897,256 | 13,563,148 |

Missouri Petroleum Storage Tank Insurance Fund
Reserve Study as of June 30, 2018
Insurance UST - Release
Development of Losses to Ultimate

| Development Period in Months | | Development of Losses to Ultimate | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---------|-----------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| RY | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | 300 - ULT | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.018 |
| 1995 | 1.095 | 1.106 | 1.151 | 1.889 | 1.193 | 1.082 | 1.122 | 1.025 | 1.000 | 1.272 | 1.000 | 1.366 | 1.049 | 1.023 | 1.091 | 1.082 | 1.016 | 1.000 | 1.044 | 1.013 | 1.008 | 1.060 | 1.002 | 1.001 | 1.018 | | |
| 1997 | 2.504 | 1.377 | 1.216 | 1.114 | 1.250 | 1.408 | 1.098 | 1.091 | 1.047 | 1.081 | 1.048 | 1.021 | 1.036 | 1.015 | 1.015 | 1.018 | 1.008 | 1.002 | 1.010 | 1.000 | 1.003 | 1.001 | 1.001 | 1.018 | | | |
| 1998 | 2.695 | 1.438 | 1.290 | 1.798 | 1.112 | 1.037 | 1.063 | 1.235 | 1.015 | 1.019 | 1.007 | 1.015 | 1.003 | 1.024 | 1.076 | 1.009 | 1.044 | 1.013 | 1.000 | 1.003 | 1.002 | 1.001 | 1.001 | 1.018 | | | |
| 1999 | 1.280 | 3.009 | 1.340 | 1.304 | 1.130 | 1.033 | 1.000 | 1.000 | 1.051 | 1.338 | 1.025 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | |
| 2000 | 3.172 | 1.271 | 1.381 | 1.564 | 1.028 | 1.029 | 1.000 | 1.037 | 1.003 | 1.014 | 1.107 | 1.052 | 1.000 | 1.028 | 1.040 | 1.000 | 1.006 | 1.005 | 1.003 | 1.002 | 1.000 | 1.001 | 1.001 | 1.018 | | | |
| 2001 | 9.416 | 1.820 | 1.430 | 1.250 | 1.084 | 1.030 | 1.050 | 1.160 | 1.045 | 1.091 | 1.000 | 1.010 | 1.083 | 1.052 | 1.040 | 1.038 | 1.020 | 1.002 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.018 | | | |
| 2002 | 14.784 | 1.513 | 1.247 | 1.168 | 1.278 | 1.063 | 1.032 | 1.155 | 1.050 | 1.057 | 1.006 | 1.070 | 1.047 | 1.000 | 1.003 | 1.012 | 1.006 | 1.002 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.018 | | | |
| 2003 | 9.260 | 1.459 | 1.219 | 1.132 | 1.061 | 1.379 | 1.212 | 1.043 | 1.504 | 1.098 | 1.104 | 1.046 | 1.043 | 1.033 | 1.064 | 1.027 | 1.006 | 1.002 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.018 | | | |
| 2004 | 1.643 | 1.382 | 1.103 | 1.442 | 1.231 | 1.095 | 1.286 | 1.072 | 1.121 | 1.050 | 1.255 | 1.147 | 1.097 | 1.229 | 1.022 | 1.027 | 1.006 | 1.002 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.018 | | | |
| 2005 | 1.066 | 1.671 | 5.528 | 1.293 | 1.177 | 1.428 | 1.189 | 1.256 | 1.219 | 1.137 | 1.032 | 1.314 | 1.098 | 1.018 | 1.022 | 1.027 | 1.006 | 1.002 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.018 | | | |
| 2006 | 1.000 | 1.000 | 6.470 | 1.171 | 1.049 | 1.000 | 1.369 | 1.067 | 1.211 | 1.120 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.001 | 1.001 | 1.018 | | | |
| 2007 | 13.702 | 1.333 | 1.254 | 1.076 | 1.120 | 1.072 | 1.054 | 1.010 | 1.170 | 1.034 | 1.022 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | |
| 2008 | 1.316 | 1.096 | 1.028 | 1.066 | 1.055 | 1.037 | 1.093 | 1.155 | 1.059 | 1.027 | 1.031 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | |
| 2009 | 4.004 | 1.255 | 1.467 | 1.039 | 1.050 | 1.036 | 1.017 | 1.024 | 1.055 | 1.032 | 1.031 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | |
| 2010 | 17.254 | 1.587 | 1.461 | 1.027 | 1.217 | 1.072 | 1.205 | 1.049 | 1.095 | 1.032 | 1.031 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | |
| 2011 | 5.534 | 1.347 | 1.215 | 1.179 | 1.021 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2012 | 3.464 | 2.126 | 1.414 | 1.190 | 1.404 | 1.089 | 1.054 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2013 | 1.409 | 1.931 | 1.151 | 1.115 | 1.446 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2014 | 19.137 | 1.226 | 1.156 | 1.068 | 1.154 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2015 | 5.264 | 1.996 | 1.271 | 1.130 | 1.154 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2016 | 28.197 | 1.598 | 1.220 | 1.130 | 1.154 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2017 | 1.359 | 1.445 | 1.220 | 1.130 | 1.154 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 2018 | 11.607 | 1.445 | 1.220 | 1.130 | 1.154 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.005 | 1.003 | 1.002 | 1.001 | 1.001 | 1.001 | 1.018 | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.018 |
| 1995 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.018 |
| 1996 | 60.806 | 127.123 | 140.605 | 161.781 | 205.670 | 364.732 | 394.527 | 422.597 | 453.405 | 453.495 | 576.781 | 576.781 | 576.820 | 826.524 | 853.309 | 930.849 | 1,007.552 | 1,023.213 | 1,023.213 | 1,068.112 | 1,082.062 | 1,090.678 | 1,155.906 | 1,157.826 | 1,180.532 | 1,204.682 | |
| 1997 | 150.598 | 377.057 | 510.325 | 631.334 | 703.367 | 870.004 | 1,237.696 | 1,359.105 | 1,493.433 | 1,552.597 | 1,679.250 | 1,769.677 | 1,797.439 | 1,862.046 | 1,900.206 | 1,917.995 | 1,953.890 | 1,968.351 | 1,972.764 | 1,976.544 | 1,995.927 | 1,995.927 | 2,000.071 | 2,003.309 | 2,006.055 | 2,042.682 | |
| 1998 | 71.919 | 193.815 | 278.696 | 359.433 | 646.106 | 715.507 | 745.388 | 922.873 | 972.136 | 978.580 | 992.873 | 992.873 | 1,025.025 | 1,075.457 | 1,082.693 | 1,099.371 | 1,103.031 | 1,120.278 | 1,125.534 | 1,126.074 | 1,128.308 | 1,209.673 | 1,302.371 | 1,304.534 | 1,326.268 | | |
| 1999 | 12.585 | 16.113 | 48.483 | 64.952 | 84.727 | 95.744 | 98.894 | 98.894 | 98.894 | 98.894 | 98.894 | 98.894 | 98.894 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | 142.573 | |
| 2000 | 140.585 | 445.502 | 565.818 | 782.614 | 1,228.312 | 1,261.017 | 1,298.340 | 1,346.953 | 1,357.619 | 1,376.791 | 1,524.125 | 1,603.731 | 1,603.891 | 1,640.000 | 1,715.267 | 1,715.267 | 1,724.971 | 1,733.371 | 1,741.870 | 1,746.391 | 1,750.017 | 1,752.924 | 1,755.253 | 1,787.300 | | | |
| 2001 | 16.703 | 157.277 | 286.167 | 409.158 | 511.400 | 554.458 | 571.001 | 590.455 | 605.506 | 626.601 | 792.933 | 801.191 | 867.543 | 965.506 | 988.261 | 996.394 | 1,003.123 | 1,008.041 | 1,010.657 | 1,012.756 | 1,014.438 | 1,015.786 | 1,024.332 | | | | |
| 2002 | 9.216 | 136.257 | 206.137 | 257.078 | 300.195 | 383.621 | 407.778 | 420.844 | 485.920 | 509.980 | 539.053 | 542.052 | 580.086 | 607.282 | 629.321 | 616.509 | 619.918 | 621.143 | 624.167 | 627.228 | 628.856 | 630.161 | 631.208 | 643.587 | | | |
| 2003 | 21.836 | 202.209 | 294.954 | 350.527 | 407.049 | 431.955 | 595.741 | 722.007 | 752.772 | 1,132.407 | 1,497.420 | 1,497.420 | 1,546.971 | 1,645.324 | 1,690.012 | 1,699.356 | 1,702.712 | 1,711.004 | 1,719.304 | 1,723.856 | 1,727.435 | 1,730.604 | 1,732.606 | | | | |
| 2004 | 71.257 | 171.703 | 161.795 | 178.485 | 257.392 | 316.743 | 346.872 | 446.145 | 478.479 | 536.422 | 563.491 | 709.142 | 753.492 | 824.898 | 850.949 | 877.003 | 960.117 | 1,013.927 | 1,031.815 | 1,054.427 | 1,083.065 | 1,089.054 | 1,091.205 | 1,096.519 | | | |
| 2005 | 32.189 | 45.369 | 87.594 | 100.842 | 112.450 | 162.643 | 175.010 | 184.403 | 195.933 | 214.501 | 227.225 | 228.050 | 249.662 | 263.655 | 268.306 | 274.186 | 281.633 | 283.190 | 283.749 | 285.131 | 286.529 | 287.273 | 288.348 | 288.731 | 294.002 | | |
| 2006 | 37.615 | 719.825 | 882.491 | 1,019.963 | 1,088.861 | 1,256.924 | 1,352.498 | 1,425.071 | 1,514.197 | 1,657.693 | 1,710.044 | 1,762.401 | 1,929.425 | 2,037.558 | 2,118.946 | 2,176.497 | 2,188.532 | 2,192.854 | 2,203.533 | 2,214.338 | 2,220.084 | 2,228.389 | 2,231.350 | 2,272.090 | | | |
| 2007 | 117.585 | 618.928 | 1,235.365 | 1,569.832 | 1,774.630 | 2,048.539 | 2,204.306 | 2,322.587 | 2,467.844 | 2,701.714 | 2,787.037 | 2,872.368 | 3,144.585 | 3,453.467 | 3,547.265 | 3,566.879 | 3,573.923 | 3,591.327 | 3,608.937 | 3,615.813 | 3,625.815 | 3,631.837 | 3,703.062 | | | | |
| 2008 | 9.664 | 272.486 | 435.421 | 531.211 | 600.512 | 693.199 | 745.909 | 785.933 | 835.086 | 914.225 | 943. | | | | | | | | | | | | | | | | |

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1996 | 2.098 | 1.106 | 1.151 | 1.889 | 1.193 | 1.082 | 1.122 | 1.025 | 1.000 | 1.272 | 1.000 | 1.366 | 1.049 | 1.032 | 1.091 | 1.082 | 1.016 | 1.000 | 1.044 | 1.013 | 1.008 | 1.006 | | |
| 1997 | 2.504 | 1.377 | 1.216 | 1.114 | 1.250 | 1.408 | 1.098 | 1.091 | 1.047 | 1.081 | 1.048 | 1.021 | 1.036 | 1.015 | 1.018 | 1.008 | 1.002 | 1.002 | 1.010 | 1.000 | | | | |
| 1998 | 2.695 | 1.438 | 1.290 | 1.798 | 1.112 | 1.037 | 1.063 | 1.235 | 1.015 | 1.063 | 1.019 | 1.007 | 1.015 | 1.003 | 1.024 | 1.076 | 1.009 | 1.044 | 1.013 | 1.000 | | | | |
| 1999 | | 1.280 | 3.009 | 1.340 | 1.304 | 1.130 | 1.033 | 1.000 | 1.000 | 1.000 | 1.051 | 1.338 | 1.025 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | |
| 2000 | | 3.172 | 1.271 | 1.381 | 1.569 | 1.028 | 1.029 | 1.000 | 1.037 | 1.008 | 1.014 | 1.107 | 1.053 | 1.000 | 1.028 | 1.040 | 1.000 | 1.006 | | | | | | |
| 2001 | 9.416 | 1.820 | 1.430 | 1.250 | 1.084 | 1.030 | 1.050 | 1.160 | 1.045 | 1.091 | 1.000 | 1.010 | 1.083 | 1.052 | 1.040 | 1.030 | 1.020 | | | | | | | |
| 2002 | 14.784 | 1.513 | 1.247 | 1.168 | 1.278 | 1.063 | 1.032 | 1.155 | 1.050 | 1.057 | 1.006 | 1.070 | 1.047 | 1.000 | 1.003 | 1.012 | | | | | | | | |
| 2003 | 9.260 | 1.459 | 1.219 | 1.132 | 1.061 | 1.379 | 1.212 | 1.043 | 1.504 | 1.098 | 1.104 | 1.046 | 1.043 | 1.033 | 1.064 | | | | | | | | | |
| 2004 | 1.643 | 1.382 | 1.103 | 1.442 | 1.231 | 1.095 | 1.286 | 1.072 | 1.121 | 1.050 | 1.255 | 1.147 | 1.097 | 1.229 | | | | | | | | | | |
| 2005 | 1.066 | 1.671 | 5.526 | 1.293 | 1.177 | 1.428 | 1.189 | 1.256 | 1.219 | 1.137 | 1.032 | 1.314 | 1.099 | | | | | | | | | | | |
| 2006 | 1.000 | 1.000 | 6.470 | 1.171 | 1.049 | 1.000 | 1.000 | 1.369 | 1.067 | 1.211 | 1.120 | | | | | | | | | | | | | |
| 2007 | 13.702 | 1.333 | 1.254 | 1.076 | 1.120 | 1.072 | 1.054 | 1.010 | 1.170 | 1.034 | 1.022 | | | | | | | | | | | | | |
| 2008 | 1.316 | 1.096 | 1.028 | 1.066 | 1.055 | 1.037 | 1.093 | 1.155 | 1.059 | 1.027 | | | | | | | | | | | | | | |
| 2009 | 4.004 | 1.255 | 1.467 | 1.039 | 1.050 | 1.036 | 1.017 | 1.024 | 1.055 | | | | | | | | | | | | | | | |
| 2010 | 17.254 | 1.587 | 1.461 | 1.027 | 1.217 | 1.072 | 1.205 | 1.049 | | | | | | | | | | | | | | | | |
| 2011 | 5.534 | 1.347 | 1.215 | 1.179 | 1.094 | 1.119 | 1.021 | | | | | | | | | | | | | | | | | |
| 2012 | 3.464 | 2.126 | 1.414 | 1.190 | 1.404 | 1.089 | | | | | | | | | | | | | | | | | | |
| 2013 | 1.409 | 1.931 | 1.151 | 1.115 | 1.446 | | | | | | | | | | | | | | | | | | | |
| 2014 | 19.137 | 1.226 | 1.156 | 1.068 | | | | | | | | | | | | | | | | | | | | |
| 2015 | 5.264 | 1.996 | 1.271 | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 28.197 | 1.598 | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 1.359 | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 2.313 | 1.585 | 1.220 | 1.101 | 1.182 | 1.108 | 1.034 | 1.106 | 1.108 | 1.032 | 1.031 | 1.214 | 1.072 | 1.085 | 1.045 | 1.032 | 1.007 | 1.021 | 1.006 | 1.008 | 1.003 | 1.049 | 1.000 | NA |
| VOL WTD 5 | 3.046 | 1.631 | 1.233 | 1.130 | 1.154 | 1.076 | 1.054 | 1.063 | 1.121 | 1.044 | 1.077 | 1.121 | 1.071 | 1.055 | 1.038 | 1.042 | 1.008 | 1.011 | 1.014 | 1.007 | 1.003 | 1.049 | 1.000 | NA |
| VOL WTD ALL | 2.990 | 1.445 | 1.244 | 1.185 | 1.176 | 1.111 | 1.077 | 1.086 | 1.105 | 1.064 | 1.046 | 1.095 | 1.056 | 1.039 | 1.038 | 1.042 | 1.010 | 1.011 | 1.014 | 1.007 | 1.003 | 1.049 | 1.000 | NA |
| ARTH 3 | 11.607 | 1.607 | 1.193 | 1.124 | 1.315 | 1.093 | 1.081 | 1.076 | 1.095 | 1.042 | 1.088 | 1.194 | 1.080 | 1.087 | 1.036 | 1.027 | 1.007 | 1.017 | 1.005 | 1.008 | 1.003 | 1.030 | 1.000 | NA |
| ARTH 5 | 11.073 | 1.775 | 1.241 | 1.116 | 1.242 | 1.071 | 1.078 | 1.048 | 1.174 | 1.063 | 1.125 | 1.140 | 1.074 | 1.063 | 1.027 | 1.032 | 1.007 | 1.010 | 1.012 | 1.006 | 1.003 | 1.030 | 1.000 | NA |
| ARTH ALL | 7.584 | 1.558 | 1.544 | 1.528 | 1.220 | 1.152 | 1.122 | 1.117 | 1.122 | 1.084 | 1.068 | 1.140 | 1.075 | 1.045 | 1.041 | 1.041 | 1.015 | 1.009 | 1.012 | 1.006 | 1.003 | 1.030 | 1.000 | NA |
| 5 YR HI LO | 8.603 | 1.842 | 1.214 | 1.120 | 1.238 | 1.066 | 1.056 | 1.028 | 1.149 | 1.050 | 1.116 | 1.113 | 1.076 | 1.028 | 1.024 | 1.027 | 1.006 | 1.003 | 1.005 | 1.005 | 1.000 | NA | NA | NA |
| 7 YR HI LO | 6.961 | 1.692 | 1.303 | 1.093 | 1.178 | 1.064 | 1.075 | 1.062 | 1.188 | 1.061 | 1.075 | 1.098 | 1.064 | 1.018 | 1.022 | 1.035 | 1.010 | 1.002 | 1.005 | 1.000 | NA | NA | NA | NA |
| ALL YR HI LO | 6.755 | 1.502 | 1.353 | 1.267 | 1.209 | 1.133 | 1.100 | 1.091 | 1.102 | 1.076 | 1.057 | 1.131 | 1.059 | 1.027 | 1.038 | 1.040 | 1.010 | 1.002 | 1.005 | 1.005 | 1.000 | NA | NA | NA |
| SELECTED | 11.607 | 1.445 | 1.220 | 1.130 | 1.154 | 1.076 | 1.054 | 1.063 | 1.095 | 1.032 | 1.031 | 1.095 | 1.056 | 1.018 | 1.022 | 1.027 | 1.006 | 1.002 | 1.005 | 1.005 | 1.003 | 1.002 | 1.001 | |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | |

| | Development in Months | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|-----|
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
| 1994 | - | - | - | 43,694 | 43,694 | 43,694 | 43,694 | 53,694 | 66,694 | 66,694 | 76,832 | 93,580 | 111,486 | 132,821 | 138,273 | 155,391 | 178,532 | 178,532 | 194,724 | 220,213 | 246,661 | | | |
| 1995 | - | - | - | 15,175 | 20,605 | 32,780 | 51,312 | 82,297 | 93,282 | 111,391 | 124,261 | 140,954 | 179,922 | 194,810 | 216,027 | 230,340 | 241,953 | 241,953 | 241,953 | 241,953 | 241,953 | 241,953 | | |
| 1996 | 60,606 | 127,123 | 140,605 | 161,781 | 305,670 | 364,732 | 394,527 | 442,597 | 453,495 | 453,495 | 576,781 | 787,820 | 826,524 | 853,309 | 930,840 | 1,007,552 | 1,023,213 | 1,023,213 | 1,068,112 | 1,082,062 | 1,090,678 | 1,155,906 | | |
| 1997 | 150,598 | 377,057 | 519,125 | 631,334 | 703,267 | 879,004 | 1,237,696 | 1,359,105 | 1,483,423 | 1,553,597 | 1,679,250 | 1,760,677 | 1,797,439 | 1,862,946 | 1,890,295 | 1,917,096 | 1,952,890 | 1,968,351 | 1,972,764 | 1,976,544 | 1,995,927 | | | |
| 1998 | 71,919 | 193,815 | 278,696 | 359,433 | 646,106 | 718,507 | 745,388 | 792,136 | 976,580 | 992,873 | 1,055,025 | 1,075,457 | 1,082,693 | 1,099,371 | 1,103,031 | 1,129,278 | 1,215,534 | 1,226,074 | 1,280,050 | 1,296,308 | | | | |
| 1999 | - | 12,585 | 16,113 | 48,483 | 64,952 | 84,727 | 95,744 | 98,894 | 98,894 | 103,964 | 139,096 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | | | | | |
| 2000 | - | 140,585 | 445,902 | 566,818 | 782,614 | 1,218,212 | 1,262,017 | 1,298,340 | 1,298,340 | 1,346,953 | 1,357,619 | 1,376,791 | 1,524,126 | 1,603,731 | 1,603,891 | 1,649,008 | 1,715,267 | 1,715,267 | 1,724,971 | | | | | |
| 2001 | 16,703 | 157,277 | 286,167 | 409,158 | 511,400 | 554,458 | 571,001 | 599,455 | 605,506 | 726,601 | 792,933 | 801,191 | 867,543 | 912,396 | 948,559 | 976,545 | 996,294 | | | | | | | |
| 2002 | 9,216 | 136,257 | 206,137 | 257,078 | 300,195 | 383,621 | 407,778 | 420,844 | 485,920 | 509,980 | 539,053 | 542,052 | 580,088 | 607,282 | 609,321 | 616,509 | | | | | | | | |
| 2003 | 21,836 | 202,209 | 294,954 | 359,527 | 407,049 | 431,955 | 595,741 | 722,007 | 752,772 | 1,132,407 | 1,243,625 | 1,372,437 | 1,435,580 | 1,497,429 | 1,546,971 | 1,645,324 | | | | | | | | |
| 2004 | 71,257 | 117,103 | 161,799 | 178,485 | 257,392 | 316,743 | 346,872 | 446,145 | 478,479 | 536,422 | 563,361 | 707,282 | 811,449 | 890,246 | 1,094,026 | | | | | | | | | |
| 2005 | 12,800 | 13,642 | 22,790 | 125,995 | 162,944 | 191,715 | 273,716 | 325,538 | 408,831 | 498,368 | 566,691 | 584,630 | 768,192 | 844,136 | 140,820 | | | | | | | | | |
| 2006 | - | 8,947 | 8,947 | 57,884 | 67,789 | 71,084 | 71,084 | 97,281 | 103,765 | 125,694 | | | | | | | | | | | | | | |
| 2007 | 58,988 | 808,267 | 1,077,402 | 1,350,931 | 1,454,130 | 1,628,782 | 1,745,892 | 1,840,192 | 1,858,776 | 2,174,856 | 2,247,778 | 2,297,257 | | | | | | | | | | | | |
| 2008 | 750,154 | 987,266 | 1,081,733 | 1,111,591 | 1,185,280 | 1,249,946 | 1,296,176 | 1,417,026 | 1,636,341 | 1,733,534 | 1,780,630 | | | | | | | | | | | | | |
| 2009 | 81,174 | 324,978 | 407,777 | 598,236 | 621,700 | 652,756 | 676,540 | 688,297 | 704,856 | 743,523 | | | | | | | | | | | | | | |
| 2010 | 3,627 | 62,582 | 99,320 | 145,127 | 148,993 | 181,398 | 194,452 | 234,328 | 245,727 | | | | | | | | | | | | | | | |
| 2011 | 134,434 | 743,915 | 1,002,303 | 1,217,775 | 1,435,417 | 1,569,874 | 1,756,333 | 1,793,765 | | | | | | | | | | | | | | | | |
| 2012 | 35,519 | 123,028 | 261,546 | 369,814 | 440,068 | 617,743 | 673,028 | | | | | | | | | | | | | | | | | |
| 2013 | 32,189 | 45,369 | 87,594 | 100,842 | 112,450 | 162,643 | | | | | | | | | | | | | | | | | | |
| 2014 | 37,615 | 719,825 | 882,491 | 1,019,963 | 1,088,861 | | | | | | | | | | | | | | | | | | | |
| 2015 | 117,585 | 618,928 | 1,235,365 | 1,569,832 | | | | | | | | | | | | | | | | | | | | |
| 2016 | 9,664 | 272,486 | 435,421 | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 626,145 | 851,011 | 17,593 | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Release
 Summary of Incurred Development Method

| (1) RY | (2) INC LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|-----------|----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | 246,661 | 246,661 | 246,661 | - | - | - |
| 1995 | 241,953 | 241,953 | 241,953 | - | - | - |
| 1996 | 1,579,163 | 1,155,906 | 1,579,163 | 423,257 | - | 423,257 |
| 1997 | 1,995,927 | 1,995,927 | 1,995,927 | - | - | - |
| 1998 | 1,381,308 | 1,295,308 | 1,381,308 | 85,000 | - | 85,000 |
| 1999 | 142,573 | 142,573 | 142,573 | - | - | - |
| 2000 | 2,219,267 | 1,724,971 | 2,219,267 | 494,297 | - | 494,297 |
| 2001 | 1,084,938 | 996,294 | 1,081,236 | 84,942 | 3,703 | 88,644 |
| 2002 | 727,076 | 616,509 | 719,666 | 103,156 | 7,410 | 110,567 |
| 2003 | 2,242,938 | 1,645,324 | 2,190,077 | 544,753 | 52,861 | 597,614 |
| 2004 | 1,420,364 | 1,094,026 | 1,353,638 | 259,602 | 66,736 | 326,328 |
| 2005 | 1,246,652 | 844,136 | 1,160,547 | 316,412 | 86,105 | 402,517 |
| 2006 | 234,210 | 140,820 | 213,084 | 72,264 | 21,126 | 93,390 |
| 2007 | 2,870,172 | 2,297,257 | 2,488,778 | 191,520 | 381,394 | 572,914 |
| 2008 | 2,365,525 | 1,780,630 | 2,052,177 | 271,547 | 313,348 | 584,894 |
| 2009 | 1,445,591 | 743,523 | 1,240,247 | 496,725 | 205,344 | 702,069 |
| 2010 | 378,102 | 245,727 | 316,478 | 70,751 | 61,625 | 132,375 |
| 2011 | 2,611,670 | 1,793,765 | 2,064,707 | 270,942 | 546,963 | 817,905 |
| 2012 | 1,194,538 | 673,028 | 914,659 | 241,631 | 279,879 | 521,510 |
| 2013 | 325,579 | 162,643 | 231,563 | 68,921 | 94,016 | 162,937 |
| 2014 | 2,346,383 | 1,088,861 | 1,573,979 | 485,118 | 772,404 | 1,257,522 |
| 2015 | 3,727,382 | 1,569,832 | 2,292,174 | 722,342 | 1,435,207 | 2,157,550 |
| 2016 | 1,732,453 | 435,421 | 971,174 | 535,753 | 761,279 | 1,297,032 |
| 2017 | 2,874,069 | 851,011 | 1,479,562 | 628,551 | 1,394,507 | 2,023,057 |
| 2018 | 930,100 | 17,593 | 316,002 | 298,409 | 614,098 | 912,506 |
| TOTAL | 37,564,595 | 23,800,698 | 30,466,590 | 6,665,892 | 7,098,005 | 13,763,896 |

| Development Period in Months | | Sales Performance Data | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|-----------|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| RY | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | 300 - ULT | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | |
| 1995 | 1,000 | 1,000 | 1,813 | 1,217 | 0,548 | 1,278 | 1,777 | 0,919 | 0,822 | 1,000 | 1,000 | 1,143 | 1,107 | 1,000 | 1,000 | 0,923 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | |
| 1996 | 1,474 | 1,153 | 0,784 | 3,459 | 1,255 | 0,930 | 0,978 | 1,000 | 0,819 | 1,012 | 1,000 | 1,041 | 1,000 | 1,017 | 1,385 | 0,988 | 1,000 | 1,000 | 1,000 | 1,110 | 1,041 | 1,000 | 1,000 | 1,000 | 1,000 | | | | |
| 1997 | 1,213 | 1,080 | 1,386 | 1,059 | 1,155 | 1,093 | 1,198 | 0,957 | 0,995 | 1,000 | 1,032 | 1,000 | 1,000 | 1,000 | 1,006 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 0,935 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 1998 | 1,576 | 1,426 | 1,285 | 1,532 | 1,012 | 1,102 | 0,971 | 1,005 | 1,018 | 1,004 | 0,968 | 1,033 | 0,947 | 1,005 | 1,021 | 1,014 | 1,000 | 0,988 | 1,000 | 1,030 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 1999 | 0,594 | 1,000 | 1,738 | 1,000 | 0,952 | 0,795 | 0,854 | 1,000 | 1,000 | 1,202 | 1,256 | 1,008 | 0,948 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2000 | 1,189 | 1,625 | 1,185 | 0,983 | 0,923 | 1,013 | 0,886 | 1,000 | 1,022 | 1,002 | 0,982 | 1,121 | 0,992 | 1,241 | 0,993 | 1,031 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2001 | 0,559 | 0,945 | 1,079 | 0,779 | 1,080 | 0,964 | 1,027 | 1,153 | 1,000 | 0,959 | 1,018 | 1,000 | 1,077 | 1,000 | 1,019 | 0,990 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2002 | 1,176 | 1,166 | 0,925 | 1,000 | 0,907 | 0,955 | 1,108 | 1,007 | 0,802 | 1,027 | 1,043 | 1,000 | 0,987 | 1,000 | 1,027 | 1,000 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2003 | 0,949 | 0,918 | 1,212 | 0,948 | 1,232 | 1,141 | 1,029 | 1,018 | 1,186 | 1,051 | 1,000 | 1,018 | 1,033 | 0,993 | 1,061 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2004 | 0,824 | 0,891 | 0,981 | 1,381 | 1,024 | 1,650 | 1,000 | 1,033 | 1,449 | 1,000 | 0,960 | 1,000 | 1,013 | 1,114 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2005 | 0,907 | 1,000 | 0,996 | 1,014 | 0,958 | 2,418 | 1,079 | 1,031 | 1,029 | 1,004 | 0,998 | 1,215 | 1,016 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2006 | 0,750 | 1,000 | 1,349 | 1,586 | 1,000 | 0,942 | 1,000 | 1,410 | 1,000 | 1,000 | 1,000 | 1,023 | 1,024 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2007 | 2,668 | 1,000 | 0,995 | 0,975 | 1,248 | 1,011 | 1,060 | 1,025 | 1,000 | 1,027 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2008 | 1,023 | 0,933 | 1,022 | 1,075 | 1,010 | 0,987 | 1,031 | 1,128 | 1,054 | 1,008 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2009 | 0,617 | 0,966 | 1,049 | 1,000 | 0,980 | 1,478 | 0,965 | 1,000 | 0,994 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2010 | 0,722 | 1,118 | 0,966 | 1,165 | 1,131 | 0,914 | 1,000 | 1,000 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2011 | 1,634 | 1,105 | 1,092 | 0,992 | 0,995 | 1,011 | 1,030 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2012 | 1,001 | 1,386 | 1,428 | 1,273 | 1,096 | 0,860 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2013 | 0,652 | 0,774 | 1,000 | 1,456 | 1,099 | 1,077 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2014 | 1,087 | 1,038 | 1,086 | 1,054 | 1,060 | 1,077 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2015 | 1,847 | 1,248 | 1,013 | 1,091 | 1,060 | 1,077 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2016 | 1,555 | 1,006 | 1,097 | 1,091 | 1,060 | 1,077 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2017 | 1,144 | 1,089 | 1,097 | 1,091 | 1,060 | 1,077 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| 2018 | 1,515 | 1,089 | 1,097 | 1,091 | 1,060 | 1,077 | 1,032 | 1,059 | 1,025 | 1,011 | 1,000 | 1,049 | 1,023 | 1,024 | 1,025 | 1,014 | 1,007 | 1,003 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT | | |
| 1994 | 50,000 | 62,000 | 62,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 93,694 | 93,694 | 96,832 | 122,832 | 122,832 | 142,074 | 158,405 | 158,405 | 218,773 | 220,532 | 220,532 | 250,211 | 246,661 | 246,661 | 246,661 | 246,661 | | |
| 1995 | 100,005 | 100,005 | 181,297 | 220,697 | 120,868 | 154,430 | 274,384 | 252,195 | 207,200 | 207,200 | 207,200 | 236,757 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | 262,200 | | | |
| 1996 | 216,462 | 319,010 | 367,737 | 288,272 | 99,078 | 1,251,389 | 1,163,182 | 1,137,140 | 931,234 | 942,582 | 942,582 | 980,842 | 980,842 | 997,795 | 1,382,140 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 |
| 1997 | 74,677 | 906,602 | 978,833 | 1,356,420 | 1,436,651 | 1,659,199 | 1,813,028 | 1,721,721 | 2,079,080 | 2,076,828 | 2,076,828 | 2,057,038 | 2,057,038 | 2,111,861 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | 2,122,127 | |
| 1998 | 280,352 | 441,921 | 629,991 | 809,760 | 1,240,170 | 1,255,103 | 1,382,637 | 1,378,262 | 1,378,262 | 1,378,262 | 1,378,262 | 1,378,815 | 1,378,815 | 1,378,952 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | 1,305,491 | |
| 1999 | 148,000 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | 187,973 | | | |
| 2000 | 1,862,012 | 1,040,851 | 983,642 | 1,061,656 | 1,282,704 | 1,327,039 | 1,513,804 | 1,548,735 | 1,795,459 | 1,814,749 | 1,974,626 | 1,974,626 | 2,016,726 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | 2,077,214 | | |
| 2001 | 675,164 | 793,896 | 925,518 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | 1,085,817 | | | | |
| 2002 | 1,076,012 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | 1,021,470 | | | | |
| 2003 | 496,850 | 490,451 | 364,653 | 357,620 | 404,041 | 505,771 | 834,631 | 861,678 | 1,248,642 | 1,248,642 | 1,199,204 | 1,199,204 | 1,215,087 | 1,353,628 | 1,386,889 | 1,405,888 | 1,415,517 | 1,420,364 | 1,420,364 | 1,420,364 | 1,420,364 | 1,420,364 | 1,420,364 | 1,420,364 | 1,420,364 | 1,420,364 | | | |
| 2004 | 386,006 | 350,003 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | 348,601 | | | |
| 2005 | 200,101 | 75,001 | 101,150 | 160,447 | 151,084 | 151,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | | |
| 2006 | 882,440 | 1,820,729 | 1,821,179 | 1,821,179 | 1,767,555 | 2, | | | | | | | | | | | | | | | | | | | | | | | |

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1.000 | 1.000 | 1.813 | 1.217 | 0.548 | 1.278 | 1.777 | 0.919 | 0.822 | 1.000 | 1.000 | 1.143 | 1.107 | 1.000 | 1.000 | 0.923 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | |
| 1996 | 1.474 | 1.153 | 0.784 | 3.459 | 1.255 | 0.930 | 0.978 | 1.000 | 0.819 | 1.012 | 1.000 | 1.041 | 1.000 | 1.017 | 1.385 | 0.988 | 1.000 | 1.000 | 1.000 | 1.000 | 1.110 | 1.041 | | | |
| 1997 | 1.213 | 1.080 | 1.386 | 1.059 | 1.155 | 1.093 | 1.198 | 0.957 | 0.995 | 1.000 | 1.032 | 1.000 | 1.000 | 1.000 | 1.006 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.935 | 1.000 | | | |
| 1998 | 1.576 | 1.426 | 1.285 | 1.532 | 1.012 | 1.102 | 0.971 | 1.005 | 1.018 | 1.000 | 0.968 | 1.033 | 0.947 | 1.005 | 1.021 | 1.014 | 1.000 | 0.988 | 1.000 | 1.030 | | | | | |
| 1999 | 0.594 | 1.000 | 1.738 | 1.000 | 0.952 | 0.795 | 0.854 | 1.000 | 1.000 | 1.202 | 1.256 | 1.000 | 0.948 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | |
| 2000 | 1.189 | 1.625 | 1.185 | 0.983 | 0.923 | 1.013 | 0.886 | 1.000 | 1.022 | 1.002 | 0.982 | 1.121 | 0.992 | 1.241 | 0.993 | 1.031 | 1.000 | 1.009 | | | | | | | |
| 2001 | 0.559 | 0.945 | 1.079 | 0.779 | 1.080 | 0.964 | 1.027 | 1.153 | 1.000 | 0.959 | 1.018 | 1.000 | 1.077 | 1.000 | 1.019 | 0.990 | 1.000 | | | | | | | | |
| 2002 | 1.176 | 1.166 | 0.925 | 1.000 | 0.907 | 0.955 | 1.108 | 1.007 | 0.802 | 1.027 | 1.043 | 1.000 | 0.987 | 1.000 | 1.027 | 1.000 | | | | | | | | | |
| 2003 | 0.949 | 0.918 | 1.212 | 0.948 | 1.232 | 1.141 | 1.029 | 1.018 | 1.186 | 1.051 | 1.000 | 1.018 | 1.033 | 0.993 | 1.061 | | | | | | | | | | |
| 2004 | 0.824 | 0.891 | 0.981 | 1.381 | 1.024 | 1.650 | 1.000 | 1.033 | 1.449 | 1.000 | 0.960 | 1.000 | 1.013 | 1.114 | | | | | | | | | | | |
| 2005 | 0.907 | 1.000 | 0.996 | 1.014 | 0.958 | 2.418 | 1.079 | 1.031 | 1.029 | 1.000 | 0.998 | 1.215 | 1.016 | | | | | | | | | | | | |
| 2006 | 0.750 | 1.000 | 1.349 | 1.586 | 1.000 | 0.942 | 1.000 | 1.410 | 1.000 | 1.000 | 1.000 | | | | | | | | | | | | | | |
| 2007 | 2.668 | 1.000 | 0.995 | 0.975 | 1.248 | 1.011 | 1.060 | 1.025 | 1.000 | 1.027 | 1.000 | | | | | | | | | | | | | | |
| 2008 | 1.023 | 0.933 | 1.022 | 1.075 | 1.010 | 0.987 | 1.031 | 1.128 | 1.054 | 1.008 | | | | | | | | | | | | | | | |
| 2009 | 0.617 | 0.966 | 1.049 | 1.000 | 0.980 | 1.478 | 0.965 | 1.000 | 0.994 | | | | | | | | | | | | | | | | |
| 2010 | 0.722 | 1.118 | 0.966 | 1.165 | 1.131 | 0.914 | 1.000 | 1.000 | | | | | | | | | | | | | | | | | |
| 2011 | 1.634 | 1.105 | 1.092 | 0.992 | 0.995 | 1.011 | 1.030 | | | | | | | | | | | | | | | | | | |
| 2012 | 1.001 | 1.386 | 1.428 | 1.273 | 1.096 | 0.860 | | | | | | | | | | | | | | | | | | | |
| 2013 | 0.652 | 0.774 | 1.000 | 1.456 | 1.099 | | | | | | | | | | | | | | | | | | | | |
| 2014 | 1.087 | 1.038 | 1.086 | 1.054 | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 1.847 | 1.248 | 1.013 | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 1.555 | 1.006 | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 1.144 | | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 1.470 | 1.123 | 1.039 | 1.148 | 1.032 | 0.954 | 1.004 | 1.067 | 1.017 | 1.017 | 1.000 | 1.086 | 1.023 | 1.031 | 1.043 | 1.014 | 1.000 | 1.001 | 1.000 | 0.979 | 1.042 | 1.036 | 1.000 | NA | |
| VOL WTD 5 | 1.311 | 1.131 | 1.089 | 1.082 | 1.029 | 1.040 | 1.027 | 1.059 | 1.018 | 1.012 | 0.993 | 1.047 | 1.028 | 1.080 | 1.025 | 1.014 | 1.000 | 1.000 | 0.980 | 1.042 | 1.036 | 1.000 | NA | | |
| VOL WTD ALL | 1.129 | 1.089 | 1.097 | 1.091 | 1.060 | 1.077 | 1.032 | 1.026 | 1.025 | 1.011 | 0.997 | 1.049 | 1.008 | 1.049 | 1.052 | 1.008 | 0.998 | 1.000 | 1.000 | 0.980 | 1.042 | 1.036 | 1.000 | NA | |
| ARTH 3 | 1.515 | 1.097 | 1.033 | 1.261 | 1.063 | 0.928 | 0.998 | 1.043 | 1.016 | 1.012 | 0.999 | 1.072 | 1.021 | 1.036 | 1.036 | 1.007 | 1.000 | 0.999 | 1.000 | 0.988 | 1.037 | 1.021 | 1.000 | NA | |
| ARTH 5 | 1.257 | 1.090 | 1.124 | 1.188 | 1.060 | 1.050 | 1.017 | 1.113 | 1.016 | 1.008 | 0.992 | 1.047 | 1.025 | 1.070 | 1.020 | 1.007 | 1.000 | 0.999 | 1.000 | 0.991 | 1.037 | 1.021 | 1.000 | NA | |
| ARTH ALL | 1.137 | 1.081 | 1.161 | 1.247 | 1.032 | 1.141 | 1.058 | 1.043 | 1.013 | 1.021 | 1.017 | 1.051 | 1.011 | 1.037 | 1.056 | 1.004 | 0.989 | 0.999 | 1.000 | 0.991 | 1.037 | 1.021 | 1.000 | NA | |
| 5 YR HI LO | 1.262 | 1.097 | 1.064 | 1.164 | 1.063 | 0.971 | 1.020 | 1.051 | 1.010 | 1.004 | 0.999 | 1.006 | 1.021 | 1.038 | 1.015 | 1.005 | 1.000 | 1.000 | 1.000 | 1.000 | NA | NA | NA | NA | |
| 7 YR HI LO | 1.284 | 1.103 | 1.048 | 1.113 | 1.066 | 0.973 | 1.024 | 1.043 | 1.054 | 1.013 | 1.003 | 1.028 | 1.008 | 1.024 | 1.013 | 1.002 | 1.000 | 1.000 | 1.000 | 1.000 | NA | NA | NA | NA | |
| ALL YR HI LO | 1.092 | 1.069 | 1.147 | 1.151 | 1.047 | 1.083 | 1.024 | 1.025 | 0.995 | 1.011 | 1.001 | 1.039 | 1.007 | 1.017 | 1.018 | 1.002 | 1.000 | 1.000 | 1.000 | 1.000 | NA | NA | NA | NA | |
| SELECTED | 1.515 | 1.089 | 1.097 | 1.091 | 1.060 | 1.077 | 1.032 | 1.059 | 1.025 | 1.011 | 1.000 | 1.049 | 1.023 | 1.024 | 1.025 | 1.014 | 1.007 | 1.003 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | NA | |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | | |

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
| 1994 | 50,001 | 62,000 | 62,000 | 75,000 | 75,000 | 75,000 | 75,000 | 75,000 | 93,694 | 93,694 | 96,832 | 122,832 | 142,070 | 158,405 | 158,405 | 158,405 | 218,273 | 220,532 | 220,532 | 229,333 | 250,213 | 246,661 | 246,661 | |
| 1995 | 100,005 | 100,005 | 100,005 | 181,297 | 220,697 | 120,868 | 154,430 | 274,384 | 252,195 | 207,200 | 207,200 | 207,200 | 236,757 | 262,200 | 262,200 | 262,200 | 241,953 | 241,953 | 241,953 | 241,953 | 241,953 | 241,953 | 241,953 | |
| 1996 | 216,462 | 319,010 | 367,737 | 288,272 | 997,058 | 1,251,389 | 1,163,182 | 1,137,140 | 1,137,140 | 931,235 | 942,582 | 942,582 | 980,842 | 997,795 | 1,382,410 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,366,007 | 1,516,413 | 1,579,163 | |
| 1997 | 746,677 | 906,602 | 978,833 | 1,356,420 | 1,436,651 | 1,659,199 | 1,813,028 | 2,172,721 | 2,079,080 | 2,067,828 | 2,057,038 | 2,057,038 | 2,121,861 | 2,122,127 | 2,122,127 | 2,122,127 | 2,135,701 | 2,135,701 | 2,135,701 | 2,135,701 | 2,135,701 | 1,995,927 | 1,995,927 | |
| 1998 | 280,352 | 441,921 | 629,991 | 809,760 | 1,240,170 | 1,255,103 | 1,382,637 | 1,342,716 | 1,349,223 | 1,373,262 | 1,378,815 | 1,334,952 | 1,378,952 | 1,305,491 | 1,311,491 | 1,339,090 | 1,358,000 | 1,358,000 | 1,341,060 | 1,341,060 | 1,381,308 | | | |
| 1999 | 148,000 | 87,973 | 87,973 | 152,864 | 152,864 | 145,514 | 115,744 | 98,894 | 98,894 | 118,894 | 98,894 | 149,287 | 150,410 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | 142,573 | | |
| 2000 | 830,000 | 986,785 | 1,603,954 | 1,900,891 | 1,868,003 | 1,724,741 | 1,747,051 | 1,548,700 | 1,582,140 | 1,585,805 | 1,557,714 | 1,746,592 | 1,731,797 | 2,148,891 | 2,133,481 | 2,199,740 | 2,199,740 | 2,219,267 | | | | | | |
| 2001 | 1,862,012 | 1,040,851 | 983,642 | 1,061,656 | 827,034 | 892,953 | 860,467 | 883,417 | 1,018,928 | 977,435 | 995,386 | 995,386 | 1,071,788 | 1,071,788 | 1,092,066 | 1,081,236 | 1,081,236 | | | | | | | |
| 2002 | 675,164 | 793,896 | 925,518 | 855,817 | 855,481 | 775,594 | 741,003 | 821,003 | 826,548 | 662,748 | 680,698 | 709,949 | 700,590 | 719,666 | 719,666 | | | | | | | | | |
| 2003 | 1,076,012 | 1,021,470 | 937,537 | 1,136,270 | 1,077,375 | 1,327,039 | 1,513,804 | 1,556,990 | 1,584,735 | 1,879,459 | 1,974,626 | 1,974,626 | 2,010,726 | 2,077,714 | 2,063,460 | 2,190,077 | | | | | | | | |
| 2004 | 496,850 | 409,451 | 364,653 | 357,620 | 494,041 | 505,771 | 834,631 | 834,631 | 861,768 | 1,248,642 | 1,248,642 | 1,199,204 | 1,199,204 | 1,215,087 | 1,353,628 | | | | | | | | | |
| 2005 | 386,006 | 350,003 | 350,003 | 349,601 | 353,601 | 338,873 | 819,445 | 884,264 | 91,1289 | 937,852 | 941,848 | 940,095 | 1,141,835 | 1,160,547 | | | | | | | | | | |
| 2006 | 100,001 | 75,001 | 75,001 | 101,150 | 160,447 | 160,447 | 151,084 | 151,084 | 213,084 | 213,084 | 213,084 | 213,084 | 213,084 | | | | | | | | | | | |
| 2007 | 682,440 | 1,820,729 | 1,821,179 | 1,812,130 | 1,767,555 | 2,205,757 | 2,230,289 | 2,364,750 | 2,424,277 | 2,424,277 | 2,488,778 | 2,488,778 | | | | | | | | | | | | |
| 2008 | 1,588,551 | 1,624,832 | 1,516,553 | 1,550,168 | 1,666,353 | 1,682,424 | 1,660,446 | 1,711,851 | 1,930,604 | 2,035,727 | 2,052,177 | | | | | | | | | | | | | |
| 2009 | 1,426,176 | 879,758 | 849,967 | 891,837 | 891,837 | 874,344 | 1,292,547 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | 1,247,747 | | |
| 2010 | 337,003 | 243,262 | 272,086 | 262,819 | 306,255 | 346,255 | 316,478 | 316,478 | 316,478 | 316,478 | 316,478 | | | | | | | | | | | | | |
| 2011 | 1,018,742 | 1,664,572 | 1,839,853 | 2,009,107 | 1,993,817 | 1,983,357 | 2,004,595 | 2,064,707 | | | | | | | | | | | | | | | | |
| 2012 | 385,065 | 385,438 | 534,218 | 762,801 | 970,701 | 1,063,470 | 914,659 | | | | | | | | | | | | | | | | | |
| 2013 | 287,000 | 187,000 | 144,674 | 144,674 | 210,713 | 231,563 | | | | | | | | | | | | | | | | | | |
| 2014 | 1,217,768 | 1,324,230 | 1,374,411 | 1,493,061 | 1,573,979 | | | | | | | | | | | | | | | | | | | |
| 2015 | 981,615 | 1,813,319 | 2,263,470 | 2,292,174 | | | | | | | | | | | | | | | | | | | | |
| 2016 | 621,269 | 965,820 | 971,174 | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 1,293,565 | 1,479,562 | 316,002 | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Release
 Determination of Pure Premium

| (1) RY | (2) PAID LDM ULTIMATE | (3) INC LDM ULTIMATE | (4) SELECTED ULTIMATE | (5) POLICIES IN FORCE | (6) PURE PREMIUM |
|--------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------|
| 2008 | 2,365,876 | 2,365,525 | 2,365,701 | 2,664 | 888 |
| 2009 | 1,240,247 | 1,445,591 | 1,342,919 | 2,662 | 504 |
| 2010 | 368,719 | 378,102 | 373,411 | 2,622 | 142 |
| 2011 | 2,859,924 | 2,611,670 | 2,735,797 | 2,623 | 1,043 |
| 2012 | 1,130,634 | 1,194,538 | 1,162,586 | 2,617 | 444 |
| 2013 | 294,002 | 325,579 | 309,791 | 2,603 | 119 |
| 2014 | 2,272,090 | 2,346,383 | 2,309,236 | 2,573 | 897 |
| 2015 | 3,703,062 | 3,727,382 | 3,715,222 | 2,530 | 1,468 |
| 2016 | 1,253,068 | 1,732,453 | 1,492,761 | 2,509 | 595 |
| 2017 | 3,540,070 | 2,874,069 | 3,207,069 | 2,489 | 1,288 |
| 2018 | 849,434 | 930,100 | 889,767 | 2,487 | 358 |
| TOTAL | 37,363,846 | 37,564,595 | 37,464,220 | 28,379 | 1,320 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Insurance UST - Release

Paid Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT UNPAID | (8) EXPECTED UNPAID | (9) PAID LOSSES | (10) INDICATED ULTIMATE | (11) INCURRED LOSSES | (12) IBNR RESERVE | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|--------------------------|---------------------------|-----------------------|-------------------------------|----------------------------|-------------------------|-------------------------|-------------------------------|
| 2008 | 2,664 | 888 | 1,384 | 593 | 1,578,833 | 24.7% | 390,555 | 1,780,630 | 2,171,186 | 2,052,177 | 119,009 | 271,547 | 815 |
| 2009 | 2,662 | 504 | 752 | 620 | 1,649,243 | 27.0% | 445,973 | 743,523 | 1,189,496 | 1,240,247 | (50,752) | 496,725 | 447 |
| 2010 | 2,622 | 142 | 203 | 648 | 1,698,181 | 33.4% | 566,457 | 245,727 | 812,183 | 316,478 | 495,706 | 70,751 | 310 |
| 2011 | 2,623 | 1,043 | 1,423 | 677 | 1,775,923 | 37.3% | 662,051 | 1,793,765 | 2,455,816 | 2,064,707 | 391,110 | 270,942 | 936 |
| 2012 | 2,617 | 444 | 580 | 708 | 1,852,270 | 40.5% | 749,677 | 673,028 | 1,422,705 | 914,659 | 508,046 | 241,631 | 544 |
| 2013 | 2,603 | 119 | 149 | 740 | 1,925,969 | 44.7% | 860,520 | 162,643 | 1,023,163 | 231,563 | 791,599 | 68,921 | 393 |
| 2014 | 2,573 | 897 | 1,072 | 773 | 1,990,167 | 52.1% | 1,036,413 | 1,088,861 | 2,125,274 | 1,573,979 | 551,295 | 485,118 | 826 |
| 2015 | 2,530 | 1,468 | 1,678 | 809 | 2,045,714 | 57.6% | 1,178,479 | 1,569,832 | 2,748,311 | 2,292,174 | 456,136 | 722,342 | 1,086 |
| 2016 | 2,509 | 595 | 650 | 845 | 2,120,800 | 65.3% | 1,383,857 | 435,421 | 1,819,278 | 971,174 | 848,103 | 535,753 | 725 |
| 2017 | 2,489 | 1,288 | 1,347 | 884 | 2,199,372 | 76.0% | 1,670,656 | 851,011 | 2,521,667 | 1,479,562 | 1,042,105 | 628,551 | 1,013 |
| 2018 | 2,487 | 358 | 358 | 924 | 2,297,334 | 97.9% | 2,249,752 | 17,593 | 2,267,346 | 316,002 | 1,951,344 | 298,409 | 912 |
| TOTAL | 28,379 | | | | 21,133,807 | | 11,194,390 | 9,362,034 | 20,556,424 | 13,452,723 | 7,103,701 | 4,090,689 | 724 |

Pure Premium Selection

Trend = 1.045

| | |
|---------------------------|-------|
| 3-Year Average x Latest | 1,225 |
| 5-Year Average x Latest | 979 |
| All Year Average x Latest | 924 |
| Selected Pure Premium | 924 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Insurance UST - Release

Incurred Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT | (8) EXPECTED IBNR | (9) INCURRED LOSSES | (10) INDICATED ULTIMATE | (11) PAID LOSSES | (12) UNPAID LOSS | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|----------------|-------------------------|---------------------------|-------------------------------|------------------------|------------------------|-------------------------|-------------------------------|
| 2008 | 2,664 | 888 | 1,384 | 593 | 1,578,833 | 13.2% | 209,139 | 2,052,177 | 2,261,316 | 1,780,630 | 480,686 | 271,547 | 849 |
| 2009 | 2,662 | 504 | 752 | 620 | 1,649,243 | 14.2% | 234,272 | 1,240,247 | 1,474,520 | 743,523 | 730,997 | 496,725 | 554 |
| 2010 | 2,622 | 142 | 203 | 648 | 1,698,181 | 16.3% | 276,776 | 316,478 | 593,254 | 245,727 | 347,527 | 70,751 | 226 |
| 2011 | 2,623 | 1,043 | 1,423 | 677 | 1,775,923 | 20.9% | 371,932 | 2,064,707 | 2,436,639 | 1,793,765 | 642,874 | 270,942 | 929 |
| 2012 | 2,617 | 444 | 580 | 708 | 1,852,270 | 23.4% | 433,985 | 914,659 | 1,348,644 | 673,028 | 675,616 | 241,631 | 515 |
| 2013 | 2,603 | 119 | 149 | 740 | 1,925,969 | 28.9% | 556,153 | 231,563 | 787,717 | 162,643 | 625,074 | 68,921 | 303 |
| 2014 | 2,573 | 897 | 1,072 | 773 | 1,990,167 | 32.9% | 655,142 | 1,573,979 | 2,229,120 | 1,088,861 | 1,140,259 | 485,118 | 866 |
| 2015 | 2,530 | 1,468 | 1,678 | 809 | 2,045,714 | 38.5% | 787,691 | 2,292,174 | 3,079,865 | 1,569,832 | 1,510,033 | 722,342 | 1,217 |
| 2016 | 2,509 | 595 | 650 | 845 | 2,120,800 | 43.9% | 931,927 | 971,174 | 1,903,102 | 435,421 | 1,467,681 | 535,753 | 759 |
| 2017 | 2,489 | 1,288 | 1,347 | 884 | 2,199,372 | 48.5% | 1,067,142 | 1,479,562 | 2,546,704 | 851,011 | 1,695,693 | 628,551 | 1,023 |
| 2018 | 2,487 | 358 | 358 | 924 | 2,297,334 | 66.0% | 1,516,814 | 316,002 | 1,832,816 | 17,593 | 1,815,222 | 298,409 | 737 |
| TOTAL | 28,379 | | | | 21,133,807 | | 7,040,973 | 13,452,723 | 20,493,696 | 9,362,034 | 11,131,662 | 4,090,689 | 722 |

Pure Premium Selection

| | |
|---------------------------|-------|
| 3-Year Average x Latest | 1,225 |
| 5-Year Average x Latest | 979 |
| All Year Average x Latest | 924 |
| Selected Pure Premium | 924 |

Trend = 1.045

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Summary of Paid Development Method

| (1) RY | (2) PAID LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|-----------|-----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | 875,960 | 731,314 | 875,960 | 144,646 | - | 144,646 |
| 1995 | 830,626 | 830,629 | 830,629 | - | - | - |
| 1996 | 3,961,729 | 3,847,779 | 3,883,098 | 35,320 | 78,631 | 113,951 |
| 1997 | 4,642,882 | 4,402,894 | 4,642,882 | 239,988 | - | 239,988 |
| 1998 | 5,363,065 | 5,023,106 | 5,363,065 | 339,059 | - | 339,059 |
| 1999 | 9,777,667 | 9,232,961 | 9,576,992 | 344,031 | 200,676 | 544,706 |
| 2000 | 5,728,071 | 5,331,739 | 5,687,601 | 355,862 | 40,470 | 396,333 |
| 2001 | 2,323,281 | 2,128,279 | 2,255,449 | 127,170 | 67,832 | 195,002 |
| 2002 | 4,676,253 | 4,208,501 | 4,388,828 | 180,327 | 287,425 | 467,752 |
| 2003 | 3,471,849 | 3,063,698 | 3,379,908 | 316,210 | 91,940 | 408,150 |
| 2004 | 2,448,871 | 2,113,648 | 2,304,758 | 191,110 | 144,113 | 335,223 |
| 2005 | 2,777,699 | 2,309,907 | 2,667,437 | 357,530 | 60,262 | 417,793 |
| 2006 | 1,568,383 | 1,243,210 | 1,568,383 | 325,173 | - | 325,173 |
| 2007 | 4,243,288 | 3,449,564 | 3,753,895 | 304,331 | 489,393 | 793,724 |
| 2008 | 3,068,621 | 2,441,800 | 2,968,102 | 526,301 | 100,520 | 626,821 |
| 2009 | 2,385,549 | 1,818,000 | 2,023,386 | 205,377 | 362,164 | 567,540 |
| 2010 | 1,950,285 | 1,416,703 | 1,825,960 | 409,256 | 124,325 | 533,582 |
| 2011 | 2,059,681 | 1,439,764 | 1,605,837 | 166,073 | 453,845 | 619,918 |
| 2012 | 2,966,883 | 2,007,539 | 2,897,254 | 889,715 | 69,626 | 959,344 |
| 2013 | 3,947,338 | 2,514,517 | 3,178,441 | 663,925 | 768,894 | 1,432,818 |
| 2014 | 3,016,161 | 1,774,763 | 2,861,330 | 1,086,567 | 154,831 | 1,241,398 |
| 2015 | 3,040,122 | 1,527,986 | 1,972,587 | 444,600 | 1,067,535 | 1,512,135 |
| 2016 | 2,304,864 | 984,252 | 1,977,045 | 992,792 | 327,819 | 1,320,612 |
| 2017 | 2,543,316 | 768,576 | 2,028,988 | 1,260,412 | 514,328 | 1,774,740 |
| 2018 | 2,245,872 | 211,847 | 1,101,470 | 889,623 | 1,144,402 | 2,034,025 |
| TOTAL | 82,168,319 | 64,822,984 | 75,619,285 | 10,796,300 | 6,549,034 | 17,345,335 |

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | 300 - ULT | | |
|------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | | | |
| 1994 | 1,931 | 1,289 | 1,132 | 1,533 | 1,023 | 1,266 | 1,393 | 1,005 | 1,040 | 1,013 | 1,043 | 1,008 | 1,000 | 1,010 | 1,000 | 1,038 | 1,000 | 1,036 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,019 | | |
| 1995 | 1,951 | 1,854 | 1,381 | 1,832 | 1,102 | 1,078 | 1,059 | 1,034 | 1,022 | 1,015 | 1,052 | 1,015 | 1,018 | 1,008 | 1,011 | 1,004 | 1,023 | 1,022 | 1,009 | 1,008 | 1,006 | 1,005 | 1,005 | 1,019 | 1,019 | | |
| 1997 | 5,932 | 1,929 | 1,608 | 1,303 | 1,185 | 1,275 | 1,075 | 1,043 | 1,055 | 1,059 | 1,023 | 1,040 | 1,051 | 1,045 | 1,019 | 1,014 | 1,016 | 1,050 | 1,021 | 1,014 | 1,007 | 1,006 | 1,005 | 1,019 | 1,019 | | |
| 1998 | 5,396 | 1,373 | 1,182 | 1,137 | 1,047 | 1,093 | 1,057 | 1,077 | 1,068 | 1,091 | 1,022 | 1,062 | 1,028 | 1,009 | 1,026 | 1,015 | 1,047 | 1,054 | 1,027 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | 1,019 | | |
| 1999 | 3,145 | 1,413 | 1,151 | 1,230 | 1,119 | 1,083 | 1,054 | 1,045 | 1,051 | 1,035 | 1,034 | 1,044 | 1,017 | 1,015 | 1,021 | 1,022 | 1,010 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | 1,019 | | | |
| 2000 | 2,794 | 1,171 | 1,209 | 1,059 | 1,096 | 1,051 | 1,083 | 1,030 | 1,048 | 1,023 | 1,069 | 1,019 | 1,023 | 1,018 | 1,027 | 1,038 | 1,013 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | | |
| 2001 | 1,379 | 1,610 | 1,131 | 1,121 | 1,052 | 1,061 | 1,021 | 1,044 | 1,031 | 1,037 | 1,057 | 1,024 | 1,013 | 1,024 | 1,018 | 1,023 | 1,030 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2002 | 2,952 | 1,311 | 1,160 | 1,055 | 1,048 | 1,343 | 1,023 | 1,026 | 1,012 | 1,018 | 1,028 | 1,020 | 1,012 | 1,019 | 1,032 | 1,000 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2003 | 2,242 | 1,245 | 1,134 | 1,118 | 1,091 | 1,096 | 1,060 | 1,025 | 1,029 | 1,042 | 1,015 | 1,027 | 1,006 | 1,016 | 1,044 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2004 | 6,475 | 1,290 | 1,079 | 1,064 | 1,094 | 1,117 | 1,039 | 1,023 | 1,013 | 1,082 | 1,016 | 1,028 | 1,024 | 1,007 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2005 | 2,800 | 1,295 | 1,163 | 1,080 | 1,079 | 1,006 | 1,039 | 1,058 | 1,049 | 1,027 | 1,016 | 1,110 | 1,038 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2006 | 3,574 | 1,540 | 1,136 | 1,366 | 1,032 | 1,073 | 1,086 | 1,027 | 1,001 | 1,027 | 1,000 | 1,016 | 1,019 | 1,022 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | 1,019 | | | | |
| 2007 | 4,897 | 1,574 | 1,091 | 1,110 | 1,096 | 1,059 | 1,011 | 1,071 | 1,089 | 1,037 | 1,041 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,019 | | | |
| 2008 | 3,181 | 1,294 | 1,214 | 1,216 | 1,094 | 1,068 | 1,037 | 1,047 | 1,049 | 1,022 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | | | |
| 2009 | 4,550 | 1,176 | 1,057 | 1,032 | 1,024 | 1,025 | 1,018 | 1,008 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | | |
| 2010 | 9,898 | 1,200 | 1,190 | 1,142 | 1,092 | 1,042 | 1,038 | 1,055 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2011 | 2,092 | 1,360 | 1,105 | 1,049 | 1,034 | 1,106 | 1,077 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2012 | 2,259 | 1,678 | 1,189 | 1,204 | 1,119 | 1,072 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2013 | 2,154 | 1,421 | 1,329 | 1,240 | 1,184 | 1,062 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2014 | 7,132 | 1,486 | 1,179 | 1,112 | 1,083 | 1,062 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2015 | 10,893 | 2,283 | 1,132 | 1,171 | 1,083 | 1,062 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2016 | 3,832 | 1,726 | 1,177 | 1,171 | 1,083 | 1,062 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,005 | 1,019 | | |
| 2017 | 3,572 | 1,413 | 1,177 | 1,171 | 1,083 | 1,062 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,019 | | | |
| 2018 | 3,204 | 1,413 | 1,177 | 1,171 | 1,083 | 1,062 | 1,033 | 1,039 | 1,049 | 1,044 | 1,022 | 1,025 | 1,016 | 1,019 | 1,022 | 1,020 | 1,018 | 1,016 | 1,014 | 1,012 | 1,009 | 1,007 | 1,006 | 1,019 | | | |
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT | |
| 1994 | 17,096 | 27,184 | 34,895 | 95,084 | 132,148 | 149,193 | 202,874 | 336,027 | 379,362 | 457,817 | 479,155 | 517,191 | 527,042 | 529,376 | 583,342 | 631,688 | 632,598 | 660,990 | 690,824 | 722,650 | 724,556 | 724,556 | 731,314 | 744,994 | 744,994 | | |
| 1995 | 89,034 | 171,911 | 221,544 | 250,710 | 384,248 | 393,149 | 497,892 | 697,392 | 725,043 | 723,723 | 766,019 | 772,311 | 779,668 | 779,668 | 801,569 | 801,569 | 801,569 | 801,569 | 801,569 | 803,629 | 830,629 | 830,629 | 834,571 | 850,184 | 850,184 | | |
| 1996 | 248,435 | 484,694 | 888,742 | 1,241,483 | 2,747,586 | 2,506,109 | 2,700,383 | 2,769,493 | 2,933,288 | 3,033,001 | 3,134,874 | 3,203,100 | 3,252,258 | 3,422,969 | 3,470,090 | 3,537,955 | 3,565,408 | 3,605,861 | 3,620,092 | 3,703,617 | 3,785,792 | 3,818,767 | 3,847,779 | 3,870,606 | 3,888,977 | 3,961,729 | |
| 1997 | 72,267 | 428,681 | 837,136 | 1,320,216 | 1,723,340 | 2,054,451 | 2,619,485 | 2,814,896 | 3,035,198 | 3,096,331 | 3,278,813 | 3,354,218 | 3,488,099 | 3,666,099 | 3,823,933 | 3,903,871 | 3,957,587 | 4,020,825 | 4,222,873 | 4,309,814 | 4,370,558 | 4,402,894 | 4,435,645 | 4,461,860 | 4,483,037 | 4,566,093 | |
| 1998 | 244,191 | 1,317,603 | 1,808,685 | 2,137,859 | 2,431,813 | 2,545,169 | 2,781,548 | 2,941,195 | 3,137,671 | 3,383,414 | 3,689,947 | 3,771,262 | 4,003,931 | 4,137,671 | 4,152,017 | 4,244,587 | 4,244,587 | 4,274,127 | 4,527,913 | 4,723,615 | 4,900,838 | 5,023,106 | 5,069,670 | 5,107,266 | 5,137,566 | 5,161,950 | 5,258,516 |
| 1999 | 786,810 | 2,474,382 | 3,496,322 | 4,023,648 | 4,948,983 | 5,540,046 | 6,496,501 | 6,495,056 | 6,710,026 | 7,522,683 | 7,784,778 | 8,050,943 | 8,403,872 | 8,550,000 | 8,654,731 | 9,049,576 | 9,137,364 | 9,236,261 | 9,426,527 | 9,426,527 | 9,533,947 | 9,598,113 | 9,777,657 | 9,777,657 | 9,777,657 | 9,777,657 | |
| 2000 | 738,273 | 2,062,618 | 2,415,497 | 2,919,665 | 3,092,893 | 3,389,522 | 3,561,543 | 3,685,501 | 3,900,320 | 4,108,957 | 4,205,211 | 4,399,521 | 4,703,612 | 4,793,636 | 4,902,861 | 4,988,988 | 5,122,230 | 5,263,743 | 5,311,739 | 5,408,965 | 5,471,641 | 5,522,361 | 5,563,215 | 5,596,321 | 5,612,882 | 5,728,071 | |
| 2001 | 493,157 | 680,163 | 1,095,144 | 1,238,075 | 1,388,175 | 1,460,247 | 1,549,347 | 1,581,683 | 1,652,001 | 1,702,772 | 1,865,996 | 1,911,098 | 1,936,133 | 1,983,119 | 2,018,978 | 2,065,730 | 2,128,279 | 2,162,530 | 2,193,853 | 2,210,274 | 2,239,846 | 2,256,457 | 2,269,844 | 2,280,617 | 2,323,281 | | |
| 2002 | 523,306 | 1,545,046 | 2,024,839 | 2,349,790 | 2,479,316 | 2,598,610 | 2,989,373 | 3,204,993 | 3,570,739 | 3,663,170 | 3,707,244 | 3,775,271 | 3,880,256 | 3,958,320 | 4,004,981 | 4,208,501 | 4,283,757 | 4,352,699 | 4,415,743 | 4,466,910 | 4,508,318 | 4,541,751 | 4,566,696 | 4,590,380 | 4,676,253 | | |
| 2003 | 558,641 | 1,252,492 | 1,559,919 | 1,768,858 | 1,977,671 | 2,141,412 | 2,194,112 | 2,293,850 | 2,342,840 | 2,416,703 | 2,486,297 | 2,551,904 | 1,585,476 | 1,625,215 | 1,651,566 | 1,683,312 | 1,721,009 | 1,785,589 | 1,815,342 | 1,841,636 | 1,862,976 | 1,880,245 | 1,894,189 | 1,905,427 | 1,914,470 | 1,950,285 | |
| 2004 | 143,829 | 931,294 | 1,201,475 | 1,389,447 | 1,672,985 | 1,872,897 | 2,007,539 | 2,073,918 | 2,155,168 | 2,261,039 | 2,360,844 | 2,4 | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1.931 | 1.289 | 1.132 | 1.533 | 1.023 | 1.266 | 1.393 | 1.005 | 1.040 | 1.013 | 1.043 | 1.008 | 1.000 | 1.010 | 1.000 | 1.028 | 1.000 | 1.000 | 1.036 | 1.000 | 1.000 | 1.000 | | |
| 1996 | 1.951 | 1.854 | 1.381 | 1.832 | 1.102 | 1.026 | 1.059 | 1.034 | 1.034 | 1.022 | 1.015 | 1.052 | 1.015 | 1.018 | 1.008 | 1.011 | 1.004 | 1.023 | 1.022 | 1.009 | 1.008 | | | |
| 1997 | 5.932 | 1.929 | 1.608 | 1.303 | 1.185 | 1.275 | 1.075 | 1.043 | 1.055 | 1.059 | 1.023 | 1.040 | 1.051 | 1.045 | 1.019 | 1.014 | 1.016 | 1.050 | 1.021 | 1.014 | 1.007 | | | |
| 1998 | 5.306 | 1.373 | 1.182 | 1.137 | 1.047 | 1.093 | 1.057 | 1.077 | 1.068 | 1.091 | 1.022 | 1.062 | 1.028 | 1.009 | 1.026 | 1.015 | 1.047 | 1.054 | 1.027 | 1.025 | | | | |
| 1999 | 3.145 | 1.413 | 1.151 | 1.230 | 1.119 | 1.083 | 1.082 | 1.054 | 1.045 | 1.051 | 1.035 | 1.034 | 1.044 | 1.017 | 1.015 | 1.021 | 1.022 | 1.010 | 1.010 | | | | | |
| 2000 | 2.794 | 1.171 | 1.209 | 1.059 | 1.096 | 1.051 | 1.035 | 1.083 | 1.030 | 1.048 | 1.022 | 1.069 | 1.019 | 1.023 | 1.018 | 1.027 | 1.028 | 1.013 | | | | | | |
| 2001 | 1.379 | 1.610 | 1.131 | 1.121 | 1.052 | 1.061 | 1.021 | 1.044 | 1.031 | 1.037 | 1.057 | 1.024 | 1.013 | 1.024 | 1.018 | 1.023 | 1.030 | | | | | | | |
| 2002 | 2.952 | 1.311 | 1.160 | 1.055 | 1.048 | 1.343 | 1.023 | 1.026 | 1.012 | 1.018 | 1.028 | 1.020 | 1.012 | 1.019 | 1.032 | 1.000 | | | | | | | | |
| 2003 | 2.242 | 1.245 | 1.134 | 1.118 | 1.091 | 1.096 | 1.060 | 1.025 | 1.029 | 1.042 | 1.015 | 1.027 | 1.006 | 1.016 | 1.044 | | | | | | | | | |
| 2004 | 6.475 | 1.290 | 1.079 | 1.064 | 1.094 | 1.117 | 1.039 | 1.023 | 1.013 | 1.082 | 1.016 | 1.028 | 1.024 | 1.007 | | | | | | | | | | |
| 2005 | 2.800 | 1.295 | 1.163 | 1.080 | 1.079 | 1.006 | 1.039 | 1.058 | 1.049 | 1.027 | 1.016 | 1.110 | 1.038 | | | | | | | | | | | |
| 2006 | 3.574 | 1.540 | 1.136 | 1.366 | 1.032 | 1.073 | 1.086 | 1.027 | 1.001 | 1.027 | 1.000 | 1.003 | | | | | | | | | | | | |
| 2007 | 4.897 | 1.574 | 1.091 | 1.110 | 1.096 | 1.059 | 1.011 | 1.071 | 1.089 | 1.037 | 1.041 | | | | | | | | | | | | | |
| 2008 | 3.181 | 1.294 | 1.214 | 1.216 | 1.094 | 1.068 | 1.037 | 1.047 | 1.057 | 1.049 | | | | | | | | | | | | | | |
| 2009 | 4.550 | 1.176 | 1.057 | 1.032 | 1.024 | 1.028 | 1.025 | 1.018 | 1.008 | | | | | | | | | | | | | | | |
| 2010 | 9.898 | 1.200 | 1.190 | 1.142 | 1.092 | 1.042 | 1.038 | 1.055 | | | | | | | | | | | | | | | | |
| 2011 | 2.092 | 1.360 | 1.105 | 1.049 | 1.034 | 1.106 | 1.077 | | | | | | | | | | | | | | | | | |
| 2012 | 2.259 | 1.678 | 1.189 | 1.204 | 1.119 | 1.072 | | | | | | | | | | | | | | | | | | |
| 2013 | 2.154 | 1.421 | 1.329 | 1.240 | 1.184 | | | | | | | | | | | | | | | | | | | |
| 2014 | 7.132 | 1.486 | 1.179 | 1.112 | | | | | | | | | | | | | | | | | | | | |
| 2015 | 10.893 | 2.283 | 1.132 | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 3.832 | 1.726 | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 3.572 | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 4.614 | 1.779 | 1.211 | 1.186 | 1.127 | 1.073 | 1.045 | 1.039 | 1.058 | 1.039 | 1.026 | 1.053 | 1.021 | 1.015 | 1.033 | 1.016 | 1.025 | 1.021 | 1.017 | 1.021 | 1.007 | 1.006 | 1.000 | NA |
| VOL WTD 5 | 3.876 | 1.672 | 1.190 | 1.157 | 1.100 | 1.062 | 1.033 | 1.047 | 1.049 | 1.044 | 1.022 | 1.036 | 1.017 | 1.019 | 1.022 | 1.018 | 1.027 | 1.023 | 1.017 | 1.021 | 1.007 | 1.006 | 1.000 | NA |
| VOL WTD ALL | 3.204 | 1.413 | 1.177 | 1.171 | 1.093 | 1.103 | 1.052 | 1.050 | 1.040 | 1.047 | 1.027 | 1.040 | 1.030 | 1.019 | 1.022 | 1.016 | 1.025 | 1.023 | 1.017 | 1.021 | 1.007 | 1.006 | 1.000 | NA |
| ARTH 3 | 6.099 | 1.831 | 1.213 | 1.185 | 1.113 | 1.073 | 1.047 | 1.040 | 1.051 | 1.037 | 1.019 | 1.047 | 1.023 | 1.014 | 1.031 | 1.017 | 1.027 | 1.026 | 1.019 | 1.020 | 1.005 | 1.004 | 1.000 | NA |
| ARTH 5 | 5.517 | 1.719 | 1.187 | 1.149 | 1.091 | 1.063 | 1.038 | 1.044 | 1.041 | 1.044 | 1.018 | 1.038 | 1.018 | 1.018 | 1.025 | 1.017 | 1.028 | 1.026 | 1.016 | 1.024 | 1.005 | 1.004 | 1.000 | NA |
| ARTH ALL | 4.132 | 1.478 | 1.188 | 1.200 | 1.085 | 1.106 | 1.066 | 1.045 | 1.037 | 1.044 | 1.026 | 1.037 | 1.026 | 1.018 | 1.021 | 1.013 | 1.026 | 1.022 | 1.016 | 1.024 | 1.005 | 1.004 | 1.000 | NA |
| 5 YR HI LO | 4.845 | 1.630 | 1.167 | 1.153 | 1.082 | 1.061 | 1.033 | 1.043 | 1.038 | 1.037 | 1.016 | 1.025 | 1.016 | 1.019 | 1.022 | 1.020 | 1.027 | 1.024 | 1.018 | 1.024 | 1.007 | NA | NA | NA |
| 7 YR HI LO | 3.790 | 1.534 | 1.159 | 1.145 | 1.087 | 1.063 | 1.043 | 1.042 | 1.031 | 1.036 | 1.023 | 1.034 | 1.021 | 1.017 | 1.022 | 1.016 | 1.025 | 1.019 | 1.018 | 1.024 | 1.007 | NA | NA | NA |
| ALL YR HI LO | 3.941 | 1.453 | 1.173 | 1.174 | 1.083 | 1.098 | 1.048 | 1.045 | 1.036 | 1.042 | 1.026 | 1.033 | 1.026 | 1.017 | 1.021 | 1.014 | 1.025 | 1.019 | 1.018 | 1.024 | 1.007 | NA | NA | NA |
| SELECTED | 3.204 | 1.413 | 1.177 | 1.171 | 1.083 | 1.062 | 1.033 | 1.039 | 1.049 | 1.044 | 1.022 | 1.025 | 1.016 | 1.019 | 1.022 | 1.020 | 1.018 | 1.016 | 1.014 | 1.012 | 1.009 | 1.007 | 1.006 | 1.005 |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Paid Losses

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 |
| 1994 | 17,096 | 27,184 | 34,895 | 50,084 | 132,148 | 132,148 | 149,193 | 202,874 | 336,027 | 379,362 | 457,817 | 470,155 | 517,191 | 527,042 | 520,376 | 583,342 | 631,688 | 632,598 | 669,990 | 690,824 | 690,824 | 722,650 | 724,556 |
| 1995 | 89,034 | 171,911 | 221,544 | 250,710 | 384,248 | 393,149 | 497,892 | 693,726 | 697,392 | 725,043 | 734,723 | 766,019 | 772,311 | 772,311 | 779,668 | 779,668 | 801,569 | 801,569 | 830,629 | 830,629 | 830,629 | 830,629 | 830,629 |
| 1996 | 248,435 | 484,694 | 898,742 | 1,241,483 | 2,274,586 | 2,506,109 | 2,700,383 | 2,769,493 | 2,933,288 | 3,033,001 | 3,134,874 | 3,203,3100 | 3,252,254 | 3,422,969 | 3,474,000 | 3,537,955 | 3,565,408 | 3,605,861 | 3,620,092 | 3,703,617 | 3,785,792 | 3,818,767 | 3,847,779 |
| 1997 | 72,435 | 148,681 | 877,136 | 1,330,215 | 1,733,340 | 2,054,451 | 2,619,485 | 2,814,896 | 2,935,198 | 3,095,331 | 3,278,812 | 3,354,318 | 3,489,094 | 3,666,009 | 3,832,033 | 3,903,871 | 3,957,587 | 4,020,225 | 4,212,873 | 4,309,814 | 4,370,558 | 4,402,894 | |
| 1998 | 244,191 | 1,317,603 | 1,808,685 | 2,137,859 | 2,431,813 | 2,545,169 | 2,781,548 | 2,941,195 | 3,167,671 | 3,383,414 | 3,689,067 | 3,771,262 | 4,003,931 | 4,114,580 | 4,152,017 | 4,258,947 | 4,324,127 | 4,527,913 | 4,773,615 | 4,900,838 | 5,023,106 | | |
| 1999 | 786,810 | 2,474,382 | 3,406,322 | 4,023,648 | 4,948,985 | 5,540,026 | 6,001,712 | 6,496,503 | 6,850,066 | 7,158,107 | 7,522,683 | 7,784,778 | 8,050,943 | 8,403,872 | 8,550,000 | 8,674,731 | 8,858,161 | 9,049,576 | 9,137,364 | 9,232,961 | | | |
| 2000 | 738,273 | 2,062,618 | 2,415,497 | 2,919,665 | 3,092,893 | 3,389,522 | 3,561,543 | 3,685,610 | 3,990,320 | 4,108,957 | 4,305,211 | 4,390,521 | 4,703,612 | 4,793,636 | 4,902,861 | 4,988,981 | 5,122,239 | 5,263,743 | 5,331,739 | | | | |
| 2001 | 493,157 | 680,163 | 1,095,144 | 1,238,075 | 1,388,175 | 1,460,247 | 1,540,347 | 1,581,683 | 1,652,001 | 1,702,772 | 1,766,170 | 1,865,996 | 1,911,094 | 1,936,133 | 1,983,119 | 2,018,978 | 2,065,730 | 2,128,279 | | | | | |
| 2002 | 523,306 | 1,545,046 | 2,024,839 | 2,349,790 | 2,479,316 | 2,598,612 | 3,489,397 | 3,570,739 | 3,663,170 | 3,707,244 | 3,775,271 | 3,880,256 | 3,958,320 | 4,004,981 | 4,079,843 | 4,208,501 | 4,208,501 | | | | | | |
| 2003 | 558,641 | 1,252,492 | 1,559,919 | 1,768,858 | 1,977,267 | 2,157,660 | 2,363,773 | 2,505,098 | 2,568,104 | 2,643,427 | 2,753,678 | 2,796,043 | 2,871,359 | 2,887,346 | 2,934,085 | 3,063,698 | | | | | | | |
| 2004 | 143,829 | 931,294 | 1,201,475 | 1,296,399 | 1,379,054 | 1,508,347 | 1,688,522 | 1,752,111 | 1,791,788 | 1,815,522 | 1,963,819 | 1,994,768 | 2,050,897 | 2,099,609 | 2,113,648 | | | | | | | | |
| 2005 | 337,211 | 944,193 | 1,222,262 | 1,421,775 | 1,535,499 | 1,656,178 | 1,665,460 | 1,730,844 | 1,831,040 | 1,920,466 | 1,971,656 | 2,004,142 | 2,224,850 | 2,309,907 | | | | | | | | | |
| 2006 | 114,292 | 408,515 | 629,120 | 714,825 | 976,707 | 1,008,098 | 1,081,296 | 1,174,274 | 1,206,522 | 1,207,387 | 1,239,850 | 1,239,850 | 1,243,210 | | | | | | | | | | |
| 2007 | 249,922 | 1,223,865 | 1,926,859 | 2,102,500 | 2,334,792 | 2,559,682 | 2,711,518 | 2,740,693 | 2,935,041 | 3,195,238 | 3,312,186 | 3,449,564 | | | | | | | | | | | |
| 2008 | 285,783 | 909,119 | 1,176,822 | 1,428,082 | 1,736,851 | 1,890,675 | 2,029,161 | 2,105,246 | 2,203,792 | 2,338,660 | 2,441,800 | | | | | | | | | | | | |
| 2009 | 281,383 | 1,280,215 | 1,505,006 | 1,590,623 | 1,641,266 | 1,680,809 | 1,727,791 | 1,771,068 | 1,803,131 | 1,818,009 | | | | | | | | | | | | | |
| 2010 | 70,430 | 697,094 | 836,490 | 995,262 | 1,136,718 | 1,241,412 | 1,293,850 | 1,342,840 | 1,416,703 | | | | | | | | | | | | | | |
| 2011 | 354,238 | 741,233 | 1,008,015 | 1,114,183 | 1,168,623 | 1,208,286 | 1,336,441 | 1,439,764 | | | | | | | | | | | | | | | |
| 2012 | 308,280 | 696,402 | 1,168,776 | 1,389,447 | 1,672,985 | 1,872,897 | 2,007,539 | | | | | | | | | | | | | | | | |
| 2013 | 420,803 | 906,448 | 1,288,052 | 1,711,865 | 2,123,471 | 2,514,517 | | | | | | | | | | | | | | | | | |
| 2014 | 127,794 | 911,475 | 1,354,211 | 1,596,521 | 1,774,763 | | | | | | | | | | | | | | | | | | |
| 2015 | 54,289 | 591,352 | 1,349,945 | 1,527,886 | | | | | | | | | | | | | | | | | | | |
| 2016 | 148,859 | 570,416 | 984,252 | | | | | | | | | | | | | | | | | | | | |
| 2017 | 215,178 | 768,576 | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 211,847 | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Summary of Incurred Development Method

| RY | (1) INC LDM RY | (2) INC LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|-------|----------------------|----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | 875,960 | 731,314 | 875,960 | 144,646 | - | 144,646 | |
| 1995 | 830,629 | 830,629 | 830,629 | - | - | - | |
| 1996 | 3,883,098 | 3,847,779 | 3,883,098 | 35,320 | - | 35,320 | |
| 1997 | 4,642,882 | 4,402,894 | 4,642,882 | 239,988 | - | 239,988 | |
| 1998 | 5,363,065 | 5,023,106 | 5,363,065 | 339,959 | - | 339,959 | |
| 1999 | 9,576,992 | 9,232,961 | 9,576,992 | 344,031 | - | 344,031 | |
| 2000 | 5,715,439 | 5,331,739 | 5,687,601 | 355,861 | 27,838 | 383,700 | |
| 2001 | 2,277,058 | 2,128,779 | 2,255,449 | 127,170 | 21,609 | 148,779 | |
| 2002 | | 4,078,585 | 4,078,585 | 97,343 | 97,343 | 27,700 | |
| 2003 | 3,454,424 | 3,053,698 | 3,379,908 | 316,210 | 74,515 | 360,725 | |
| 2004 | 2,399,803 | 2,113,648 | 2,304,758 | 191,110 | 95,046 | 286,156 | |
| 2005 | 2,786,378 | 2,309,907 | 2,667,437 | 357,530 | 118,941 | 476,472 | |
| 2006 | 1,634,727 | 1,243,210 | 1,568,383 | 325,173 | 66,344 | 391,517 | |
| 2007 | 4,003,475 | 3,449,564 | 3,753,891 | 304,331 | 249,580 | 553,912 | |
| 2008 | 3,195,561 | 2,441,800 | 2,968,102 | 526,301 | 227,459 | 753,760 | |
| 2009 | 2,172,775 | 1,818,009 | 2,023,381 | 205,377 | 149,389 | 354,766 | |
| 2010 | 2,032,235 | 1,416,703 | 1,825,960 | 409,256 | 206,275 | 615,532 | |
| 2011 | 1,813,826 | 1,439,764 | 1,605,837 | 166,073 | 207,989 | 374,062 | |
| 2012 | 3,282,856 | 2,007,539 | 2,897,254 | 889,715 | 385,602 | 1,275,317 | |
| 2013 | 3,702,844 | 2,514,517 | 3,178,441 | 663,925 | 524,403 | 1,188,327 | |
| 2014 | 3,396,279 | 1,774,763 | 2,861,330 | 1,086,567 | 534,948 | 1,621,516 | |
| 2015 | 2,419,470 | 1,527,986 | 1,972,587 | 444,600 | 446,884 | 891,484 | |
| 2016 | 2,514,485 | 984,252 | 1,977,046 | 992,791 | 537,441 | 1,530,233 | |
| 2017 | 2,859,618 | 768,576 | 2,028,988 | 1,260,412 | 830,630 | 2,091,042 | |
| 2018 | 2,375,350 | 211,847 | 1,101,470 | 889,623 | 1,273,880 | 2,163,503 | |
| TOTAL | 81,695,400 | 64,822,984 | 75,619,285 | 10,796,300 | 6,076,116 | 16,872,416 | |

Missouri Petroleum Storage Tank Insurance Fund
Reserve Study as of June 30, 2018
Insurance UST - Closure
Development of Losses to Ultimate

| BY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | 300 -ULT | | |
|------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | |
| 1995 | 1,568 | 0,944 | 0,990 | 1,403 | 1,380 | 1,130 | 1,006 | 1,003 | 1,165 | 0,989 | 0,963 | 1,000 | 1,033 | 0,953 | 1,000 | 1,000 | 1,025 | 1,000 | 1,000 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | |
| 1996 | 1,115 | 1,062 | 1,088 | 1,277 | 0,983 | 1,123 | 0,973 | 1,014 | 0,948 | 1,021 | 1,057 | 0,930 | 1,031 | 1,011 | 1,001 | 1,010 | 0,996 | 1,014 | 1,035 | 1,000 | 1,000 | 0,999 | 1,000 | 1,000 | 1,000 | | |
| 1997 | 1,358 | 1,029 | 1,121 | 1,190 | 0,932 | 1,009 | 1,006 | 0,952 | 1,008 | 0,949 | 1,007 | 1,030 | 1,036 | 1,012 | 1,029 | 1,005 | 1,037 | 1,023 | 1,004 | 0,983 | 1,007 | 1,000 | 1,000 | 1,000 | 1,000 | | |
| 1998 | 0,968 | 1,227 | 0,936 | 1,000 | 1,053 | 1,001 | 0,983 | 1,009 | 1,012 | 1,045 | 1,014 | 1,016 | 1,012 | 1,008 | 0,997 | 0,993 | 1,066 | 1,050 | 1,011 | 1,007 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 1999 | 1,377 | 1,174 | 1,037 | 1,067 | 1,059 | 1,019 | 1,058 | 0,998 | 1,115 | 1,038 | 1,005 | 1,043 | 0,997 | 1,000 | 1,009 | 1,002 | 0,974 | 0,971 | 0,999 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2000 | 1,307 | 1,026 | 1,352 | 1,020 | 0,960 | 1,014 | 0,989 | 0,994 | 1,014 | 1,019 | 1,000 | 1,023 | 1,021 | 1,000 | 1,039 | 1,011 | 1,018 | 1,002 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2001 | 0,774 | 1,045 | 1,094 | 0,950 | 1,013 | 1,048 | 0,988 | 1,032 | 1,007 | 1,037 | 1,000 | 1,014 | 0,990 | 1,031 | 1,000 | 1,011 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2002 | 1,086 | 1,231 | 1,061 | 0,999 | 1,008 | 1,176 | 0,990 | 1,001 | 1,022 | 1,019 | 0,988 | 0,985 | 1,000 | 1,013 | 0,987 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2003 | 0,656 | 1,059 | 1,034 | 1,077 | 0,985 | 0,999 | 0,992 | 0,955 | 0,986 | 1,023 | 1,031 | 1,033 | 1,035 | 1,000 | 1,000 | 1,000 | 1,005 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2004 | 0,725 | 1,020 | 0,957 | 1,153 | 0,995 | 0,915 | 1,021 | 1,022 | 1,037 | 1,008 | 1,020 | 1,039 | 1,000 | 1,097 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2005 | 0,999 | 1,065 | 0,965 | 0,916 | 1,003 | 0,977 | 1,047 | 1,044 | 0,963 | 0,984 | 1,044 | 1,127 | 0,932 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2006 | 0,697 | 0,925 | 1,016 | 1,121 | 0,970 | 0,945 | 1,009 | 1,062 | 0,985 | 1,000 | 1,105 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2007 | 1,129 | 0,948 | 0,943 | 0,962 | 1,019 | 1,019 | 1,028 | 1,090 | 1,012 | 1,005 | 1,023 | 0,998 | 1,003 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2008 | 0,720 | 0,880 | 1,052 | 1,089 | 1,016 | 1,024 | 0,994 | 1,105 | 1,064 | 1,000 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2009 | 0,825 | 0,842 | 0,957 | 1,023 | 0,974 | 1,022 | 0,998 | 1,008 | 1,073 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2010 | 0,696 | 0,928 | 0,970 | 1,076 | 1,062 | 1,073 | 0,997 | 0,983 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2011 | 0,832 | 1,000 | 1,031 | 0,966 | 1,093 | 1,020 | 1,004 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2012 | 0,858 | 0,963 | 1,329 | 1,028 | 0,996 | 1,035 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2013 | 0,764 | 1,126 | 1,009 | 0,996 | 1,083 | 1,028 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2014 | 0,746 | 1,081 | 0,949 | 1,207 | 1,019 | 1,028 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2015 | 2,616 | 1,627 | 1,100 | 1,033 | 1,019 | 1,028 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2016 | 2,752 | 1,370 | 1,037 | 1,033 | 1,019 | 1,028 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2017 | 2,579 | 1,108 | 1,037 | 1,033 | 1,019 | 1,028 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2018 | 1,530 | 1,108 | 1,037 | 1,033 | 1,019 | 1,028 | 1,003 | 1,015 | 1,036 | 0,997 | 1,010 | 1,023 | 0,998 | 1,003 | 1,019 | 1,000 | 1,012 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| BY | 12 | 24 | 36 | 48 | 60 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT |
| 1994 | 187,103 | 327,100 | 338,664 | 372,338 | 396,280 | 430,925 | 512,003 | 544,249 | 569,328 | 646,825 | 671,833 | 646,361 | 606,161 | 639,180 | 653,025 | 882,676 | 881,282 | 881,282 | 881,282 | 881,282 | 881,282 | 881,282 | 881,282 | 881,282 | 875,960 | 875,960 | 875,960 |
| 1995 | 229,050 | 359,228 | 339,169 | 335,712 | 470,908 | 649,998 | 734,664 | 739,266 | 741,392 | 863,373 | 854,043 | 822,060 | 822,060 | 849,516 | 809,668 | 829,668 | 829,668 | 829,668 | 830,629 | 830,629 | 830,629 | 830,629 | 830,629 | 830,629 | 830,629 | 830,629 | 830,629 |
| 1996 | 2,074,608 | 2,312,993 | 2,456,425 | 2,673,073 | 3,413,485 | 3,354,566 | 3,767,622 | 3,665,813 | 3,718,947 | 3,524,021 | 3,596,366 | 3,799,750 | 3,534,045 | 3,643,349 | 3,685,176 | 3,687,940 | 3,723,882 | 3,707,363 | 3,757,936 | 3,887,596 | 3,887,613 | 3,883,098 | 3,883,098 | 3,883,098 | 3,883,098 | 3,883,098 | |
| 1997 | 2,442,529 | 3,316,045 | 3,412,288 | 3,824,641 | 4,550,958 | 4,242,391 | 4,279,592 | 4,307,216 | 4,098,630 | 4,132,668 | 3,921,636 | 3,948,530 | 4,066,588 | 4,211,839 | 4,260,918 | 4,384,037 | 4,407,729 | 4,572,643 | 4,676,769 | 4,693,260 | 4,611,814 | 4,642,882 | 4,642,882 | 4,642,882 | 4,642,882 | 4,642,882 | |
| 1998 | 3,675,965 | 5,559,113 | 4,365,735 | 4,088,438 | 3,404,774 | 4,307,747 | 4,717,002 | 4,877,954 | 4,945,245 | 4,982,257 | 5,007,139 | 5,112,132 | 5,187,488 | 5,203,066 | 5,267,776 | 5,157,214 | 5,164,958 | 5,231,893 | 5,231,893 | 5,231,893 | 5,231,893 | 5,231,893 | 5,231,893 | 5,231,893 | 5,231,893 | 5,231,893 | |
| 1999 | 4,067,065 | 5,601,504 | 5,290,600 | 5,071,249 | 4,974,764 | 4,977,699 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | 5,071,245 | | |
| 2000 | 2,762,413 | 3,605,504 | 3,293,500 | 3,119,249 | 4,974,764 | 4,747,575 | 2,534,647 | 2,518,897 | 2,784,301 | 2,969,033 | 3,065,872 | 3,059,153 | 3,068,999 | 3,126,629 | 3,165,235 | 3,179,996 | 3,195,561 | 3,195,561 | 3,195,561 | 3,195,561 | 3,195,561 | 3,195,561 | 3,195,561 | 3,195,561 | 3,195,561 | | |
| 2001 | 2,253,558 | 1,743,446 | 1,632,201 | 1,993,523 | 1,894,341 | 1,873,872 | 1,869,496 | 1,884,955 | 2,023,386 | 2,018,117 | 2,037,322 | 2,084,595 | 2,080,024 | 2,086,721 | 2,125,906 | 2,152,156 | 2,162,192 | 2,172,775 | 2,172,775 | 2,172,775 | 2,172,775 | 2,172,775 | 2,172,775 | 2,172,775 | 2,172,775 | | |
| 2002 | 2,542,017 | 2,760,461 | 3,307,838 | 3,606,278 | 3,620,491 | 3,629,619 | 2,369,535 | 4,184,966 | 4,189,633 | 4,202,328 | 4,314,840 | 4,305,247 | 4,388,354 | 4,322,344 | 4,388,828 | 4,443,598 | 4,464,320 | 4,486,171 | 4,486,171 | 4,486,171 | 4,486,171 | 4,486,171 | 4,486,171 | 4,486,171 | 4,486,171 | | |
| 2003 | 2,947,566 | 2,552,226 | 2,729,345 | 2,821,402 | 3 | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1.568 | 0.944 | 0.990 | 1.403 | 1.380 | 1.130 | 1.006 | 1.003 | 1.165 | 0.989 | 0.963 | 1.000 | 1.033 | 0.953 | 1.000 | 1.000 | 1.025 | 1.000 | 1.000 | 1.001 | 1.000 | 1.000 | 1.000 | |
| 1996 | 1.115 | 1.062 | 1.088 | 1.277 | 0.983 | 1.123 | 0.973 | 1.014 | 0.948 | 1.021 | 1.057 | 0.930 | 1.031 | 1.011 | 1.001 | 1.010 | 0.996 | 1.014 | 1.035 | 1.000 | 1.000 | 0.999 | | |
| 1997 | 1.358 | 1.029 | 1.121 | 1.190 | 0.932 | 1.009 | 1.006 | 0.952 | 1.008 | 0.949 | 1.007 | 1.030 | 1.036 | 1.012 | 1.029 | 1.005 | 1.037 | 1.023 | 1.004 | 0.983 | 1.007 | | | |
| 1998 | 0.968 | 1.227 | 0.936 | 1.000 | 1.053 | 1.001 | 0.983 | 1.009 | 1.012 | 1.045 | 1.014 | 1.016 | 1.012 | 1.008 | 0.997 | 0.993 | 1.066 | 1.050 | 1.011 | 1.007 | | | | |
| 1999 | 1.377 | 1.174 | 1.037 | 1.067 | 1.059 | 1.019 | 1.058 | 0.998 | 1.115 | 1.038 | 1.005 | 1.043 | 0.997 | 1.000 | 1.009 | 1.002 | 0.974 | 0.971 | 0.999 | | | | | |
| 2000 | 1.307 | 1.026 | 1.352 | 1.020 | 0.960 | 1.014 | 0.989 | 0.994 | 1.014 | 1.019 | 1.004 | 1.023 | 1.021 | 1.000 | 1.039 | 1.011 | 1.018 | 1.002 | | | | | | |
| 2001 | 0.774 | 1.045 | 1.09 | 0.950 | 1.013 | 1.048 | 0.988 | 1.032 | 1.007 | 1.037 | 1.006 | 1.014 | 0.990 | 1.000 | 1.031 | 1.000 | 1.011 | | | | | | | |
| 2002 | 1.088 | 1.231 | 0.981 | 0.999 | 1.006 | 1.176 | 0.980 | 1.007 | 1.007 | 1.022 | 1.010 | 0.998 | 0.985 | 1.015 | 1.013 | 0.987 | | | | | | | | |
| 2003 | 0.866 | 1.069 | 1.034 | 1.071 | 0.986 | 0.979 | 0.989 | 0.992 | 1.055 | 0.986 | 1.006 | 1.035 | 1.003 | 1.011 | 1.035 | 1.060 | | | | | | | | |
| 2004 | 0.726 | 1.002 | 0.957 | 1.153 | 0.896 | 0.915 | 1.012 | 1.022 | 1.037 | 1.008 | 1.020 | 1.020 | 1.029 | 1.000 | 1.127 | 0.982 | | | | | | | | |
| 2005 | 0.899 | 1.065 | 0.965 | 0.916 | 1.023 | 0.977 | 1.047 | 1.044 | 0.963 | 0.984 | 1.044 | 1.044 | 1.027 | 1.000 | 1.105 | | | | | | | | | |
| 2006 | 0.697 | 0.925 | 1.016 | 1.121 | 0.979 | 0.945 | 0.958 | 1.009 | 0.962 | 0.985 | 1.000 | 1.105 | | | | | | | | | | | | |
| 2007 | 1.129 | 0.948 | 0.943 | 0.962 | 1.063 | 1.019 | 1.010 | 1.028 | 1.090 | 1.012 | 1.005 | | | | | | | | | | | | | |
| 2008 | 0.720 | 0.880 | 1.052 | 1.081 | 1.010 | 1.024 | 0.994 | 1.103 | 1.066 | 1.000 | | | | | | | | | | | | | | |
| 2009 | 0.825 | 0.842 | 0.957 | 1.023 | 0.974 | 1.022 | 0.998 | 1.003 | 1.073 | | | | | | | | | | | | | | | |
| 2010 | 0.696 | 0.928 | 0.970 | 1.076 | 1.062 | 1.073 | 1.007 | 0.983 | | | | | | | | | | | | | | | | |
| 2011 | 0.832 | 1.000 | 1.031 | 0.966 | 1.093 | 1.020 | 1.004 | | | | | | | | | | | | | | | | | |
| 2012 | 0.858 | 0.963 | 1.329 | 1.028 | 0.996 | 1.035 | | | | | | | | | | | | | | | | | | |
| 2013 | 0.764 | 1.126 | 1.009 | 0.996 | 1.083 | | | | | | | | | | | | | | | | | | | |
| 2014 | 0.746 | 1.081 | 0.949 | 1.207 | | | | | | | | | | | | | | | | | | | | |
| 2015 | 2.616 | 1.627 | 1.100 | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 2.752 | 1.370 | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 2.579 | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 2.641 | 1.291 | 1.011 | 1.069 | 1.051 | 1.042 | 1.003 | 1.040 | 1.078 | 1.003 | 1.016 | 1.056 | 0.998 | 1.017 | 1.032 | 1.001 | 0.999 | 0.999 | 1.003 | 0.997 | 1.003 | 0.999 | 1.000 | NA |
| VOL WTD 5 | 1.153 | 1.173 | 1.075 | 1.056 | 1.039 | 1.034 | 1.003 | 1.032 | 1.040 | 1.000 | 1.014 | 1.039 | 0.993 | 1.010 | 1.024 | 1.000 | 1.012 | 1.005 | 1.008 | 0.997 | 1.003 | 0.999 | 1.000 | NA |
| VOL WTD ALL | 1.004 | 1.071 | 1.051 | 1.059 | 1.015 | 1.028 | 1.004 | 1.068 | 1.056 | 1.013 | 1.013 | 1.023 | 1.077 | 1.006 | 1.019 | 1.002 | 1.011 | 1.005 | 1.008 | 0.997 | 1.003 | 0.999 | 1.000 | NA |
| ARTH 3 | 2.649 | 1.359 | 1.019 | 1.077 | 1.057 | 1.043 | 1.003 | 1.092 | 1.077 | 0.999 | 1.016 | 1.087 | 0.997 | 1.016 | 1.035 | 1.000 | 1.001 | 1.008 | 1.005 | 0.997 | 1.002 | 0.999 | 1.000 | NA |
| ARTH 5 | 1.892 | 1.233 | 1.084 | 1.055 | 1.041 | 1.035 | 1.003 | 1.027 | 1.031 | 0.998 | 1.015 | 1.053 | 0.993 | 1.009 | 1.030 | 0.999 | 1.021 | 1.012 | 1.010 | 0.998 | 1.002 | 0.999 | 1.000 | NA |
| ARTH ALL | 1.190 | 1.071 | 1.047 | 1.076 | 1.023 | 1.029 | 1.000 | 1.012 | 1.035 | 1.007 | 1.011 | 1.027 | 1.009 | 1.003 | 1.001 | 1.018 | 1.010 | 1.010 | 0.998 | 1.002 | 0.999 | 1.000 | NA | |
| 5 YR HI LO | 1.987 | 1.193 | 1.047 | 1.033 | 1.047 | 1.027 | 1.003 | 1.015 | 1.034 | 0.997 | 1.010 | 1.046 | 0.992 | 1.005 | 1.028 | 0.994 | 1.022 | 1.013 | 1.005 | 1.001 | 1.000 | NA | NA | NA |
| 7 YR HI LO | 1.530 | 1.108 | 1.013 | 1.042 | 1.024 | 1.003 | 1.022 | 1.039 | 1.000 | 1.011 | 1.035 | 0.996 | 1.005 | 1.024 | 1.002 | 1.017 | 1.010 | 1.005 | 1.001 | 1.000 | NA | NA | NA | NA |
| ALL YR HI LO | 1.139 | 1.055 | 1.037 | 1.067 | 1.019 | 1.027 | 0.999 | 1.010 | 1.032 | 1.009 | 1.012 | 1.026 | 1.009 | 1.006 | 1.017 | 1.002 | 1.017 | 1.010 | 1.005 | 1.001 | 1.000 | NA | NA | NA |
| SELECTED | 1.530 | 1.108 | 1.037 | 1.033 | 1.019 | 1.028 | 1.003 | 1.015 | 1.036 | 0.997 | 1.010 | 1.023 | 0.998 | 1.003 | 1.019 | 1.000 | 1.012 | 1.005 | 1.005 | 1.000 | 1.000 | 1.000 | 1.000 | NA |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Incurred Losses

| Development in Months | | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----|
| 1994 | 187,103 | 327,100 | 338,664 | 372,338 | 396,280 | 430,925 | 430,925 | 512,003 | 544,249 | 569,328 | 646,825 | 671,833 | 646,361 | 606,161 | 639,180 | 653,025 | 882,676 | 881,282 | 881,282 | 881,282 | 875,960 | 875,960 | 875,960 | 875,960 | |
| 1995 | 229,050 | 359,228 | 339,169 | 335,712 | 470,908 | 649,998 | 734,664 | 739,266 | 741,392 | 863,373 | 854,043 | 822,060 | 849,516 | 809,668 | 809,668 | 829,668 | 829,668 | 829,668 | 829,668 | 829,668 | 830,629 | 830,629 | 830,629 | 830,629 | |
| 1996 | 2,074,608 | 2,312,993 | 2,456,425 | 2,673,073 | 3,413,485 | 3,354,566 | 3,767,622 | 3,665,813 | 3,718,947 | 3,524,021 | 3,596,366 | 3,799,750 | 3,534,045 | 3,643,349 | 3,685,176 | 3,687,940 | 3,723,882 | 3,707,363 | 3,757,936 | 3,887,596 | 3,887,596 | 3,887,613 | 3,883,098 | 3,883,098 | |
| 1997 | 2,442,529 | 3,316,045 | 3,412,288 | 3,824,641 | 4,550,958 | 4,242,391 | 4,279,592 | 4,307,216 | 4,098,636 | 4,132,668 | 3,921,636 | 3,948,530 | 4,066,588 | 4,211,839 | 4,260,918 | 4,384,037 | 4,407,729 | 4,572,643 | 4,676,769 | 4,693,260 | 4,611,814 | 4,642,882 | | | |
| 1998 | 3,675,965 | 3,559,113 | 4,365,735 | 4,088,438 | 4,086,851 | 4,304,774 | 4,307,747 | 4,235,046 | 4,274,042 | 4,324,783 | 4,519,773 | 4,581,805 | 4,653,835 | 4,710,482 | 4,749,789 | 4,737,115 | 4,702,682 | 5,014,309 | 5,265,050 | 5,323,794 | 5,363,065 | | | | |
| 1999 | 4,067,062 | 5,601,871 | 6,575,350 | 6,817,456 | 7,271,227 | 7,701,357 | 7,847,662 | 8,301,938 | 8,284,562 | 9,236,158 | 9,590,694 | 9,635,104 | 10,051,467 | 10,019,020 | 10,022,011 | 10,110,720 | 10,135,116 | 9,873,136 | 9,588,326 | 9,576,992 | | | | | |
| 2000 | 2,762,343 | 3,611,594 | 3,705,600 | 5,011,259 | 5,112,429 | 4,908,784 | 4,977,899 | 4,921,943 | 4,894,275 | 4,961,257 | 5,054,305 | 5,076,112 | 5,193,017 | 5,303,446 | 5,303,354 | 5,511,724 | 5,574,262 | 5,673,733 | 5,687,601 | | | | | | |
| 2001 | 2,251,558 | 1,743,446 | 1,822,201 | 1,993,523 | 1,894,340 | 1,918,963 | 2,011,132 | 1,987,484 | 2,052,066 | 2,067,276 | 2,144,617 | 2,157,214 | 2,187,052 | 2,164,958 | 2,231,893 | 2,255,449 | | | | | | | | | |
| 2002 | 2,549,017 | 2,760,461 | 3,397,848 | 3,686,778 | 3,602,220 | 3,629,619 | 4,269,535 | 4,189,966 | 4,189,633 | 4,228,228 | 4,314,247 | 4,388,354 | 4,323,344 | 4,389,340 | 4,444,852 | 4,388,828 | | | | | | | | | |
| 2003 | 2,949,766 | 3,252,026 | 3,704,545 | 2,821,449 | 3,038,665 | 3,029,626 | 3,930,032 | 3,930,032 | 3,603,090 | 3,603,090 | 3,603,155 | 3,603,159 | 3,603,245 | 3,081,544 | 3,188,294 | 3,379,908 | | | | | | | | | |
| 2004 | 2,784,076 | 2,021,532 | 2,055,940 | 1,893,584 | 2,238,614 | 2,224,835 | 2,035,591 | 2,059,705 | 2,105,616 | 2,105,616 | 2,105,953 | 2,200,006 | 2,244,931 | 2,310,706 | 2,310,705 | 2,304,758 | | | | | | | | | |
| 2005 | 2,418,554 | 2,416,450 | 2,572,849 | 2,483,026 | 2,274,631 | 2,281,070 | 2,229,537 | 2,333,344 | 2,437,114 | 2,347,584 | 2,309,023 | 2,411,172 | 2,217,437 | 2,667,437 | | | | | | | | | | | |
| 2006 | 2,279,915 | 1,590,227 | 1,471,489 | 1,494,938 | 1,675,834 | 1,640,654 | 1,549,814 | 1,484,507 | 1,497,613 | 1,440,812 | 1,418,755 | 1,418,755 | 1,418,755 | 1,568,383 | | | | | | | | | | | |
| 2007 | 3,103,889 | 3,505,775 | 3,323,381 | 3,132,793 | 3,014,940 | 3,205,988 | 3,265,791 | 3,297,252 | 3,387,988 | 3,692,463 | 3,736,180 | 3,753,895 | | | | | | | | | | | | | |
| 2008 | 3,378,033 | 2,432,035 | 2,139,716 | 2,250,962 | 2,450,830 | 2,475,575 | 2,534,647 | 2,518,897 | 2,784,301 | 2,969,033 | 2,968,102 | | | | | | | | | | | | | | |
| 2009 | 2,770,198 | 2,286,030 | 1,923,883 | 1,840,582 | 1,883,630 | 1,833,921 | 1,873,872 | 1,869,493 | 1,884,959 | 2,023,386 | | | | | | | | | | | | | | | |
| 2010 | 2,399,535 | 1,670,654 | 1,551,137 | 1,504,347 | 1,618,767 | 1,718,575 | 1,843,937 | 1,857,606 | 1,825,960 | | | | | | | | | | | | | | | | |
| 2011 | 1,730,234 | 1,440,222 | 1,440,536 | 1,484,741 | 1,433,817 | 1,567,380 | 1,598,788 | 1,605,837 | | | | | | | | | | | | | | | | | |
| 2012 | 2,490,976 | 2,137,662 | 2,058,476 | 2,735,440 | 2,811,353 | 2,799,426 | 2,897,254 | | | | | | | | | | | | | | | | | | |
| 2013 | 3,392,371 | 2,592,125 | 2,918,959 | 2,945,843 | 2,934,795 | 3,178,441 | | | | | | | | | | | | | | | | | | | |
| 2014 | 3,096,607 | 2,310,421 | 2,498,436 | 2,371,070 | 2,861,330 | | | | | | | | | | | | | | | | | | | | |
| 2015 | 421,275 | 1,102,257 | 1,793,375 | 1,972,587 | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 524,435 | 1,443,017 | 1,977,045 | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 786,586 | 2,028,988 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 1,101,470 | | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Determination of Pure Premium

| (1) <u>RY</u> | (2) <u>PAID LDM ULTIMATE</u> | (3) <u>INC LDM ULTIMATE</u> | (4) <u>SELECTED ULTIMATE</u> | (5) <u>POLICIES IN FORCE</u> | (6) <u>PURE PREMIUM</u> |
|------------------|-------------------------------------|------------------------------------|-------------------------------------|-------------------------------------|--------------------------------|
| 2008 | 3,068,621 | 3,195,561 | 3,132,091 | 2,664 | 1,176 |
| 2009 | 2,385,549 | 2,172,775 | 2,279,162 | 2,662 | 856 |
| 2010 | 1,950,285 | 2,032,235 | 1,991,260 | 2,622 | 759 |
| 2011 | 2,059,681 | 1,813,826 | 1,936,753 | 2,623 | 738 |
| 2012 | 2,966,883 | 3,282,856 | 3,124,869 | 2,617 | 1,194 |
| 2013 | 3,947,335 | 3,702,844 | 3,825,089 | 2,603 | 1,469 |
| 2014 | 3,016,161 | 3,396,279 | 3,206,220 | 2,573 | 1,246 |
| 2015 | 3,040,122 | 2,419,470 | 2,729,796 | 2,530 | 1,079 |
| 2016 | 2,304,864 | 2,514,485 | 2,409,675 | 2,509 | 960 |
| 2017 | 2,543,316 | 2,859,618 | 2,701,467 | 2,489 | 1,085 |
| 2018 | 2,245,872 | 2,375,350 | 2,310,611 | 2,487 | 929 |
| TOTAL | 29,528,689 | 29,765,298 | 29,646,994 | 28,379 | 1,045 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Insurance UST - Closure

Paid Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT UNPAID | (8) EXPECTED UNPAID | (9) PAID LOSSES | (10) INDICATED ULTIMATE | (11) INCURRED LOSSES | (12) IBNR RESERVE | (13) CASE RESERVE | (14) ULTIMATE PURE PREM | |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|--------------------------|---------------------------|-----------------------|-------------------------------|----------------------------|-------------------------|-------------------------|-------------------------------|-------|
| 2008 | 2,664 | 1,176 | 1,299 | 980 | 2,611,069 | 20.4% | 533,358 | 2,441,800 | 2,975,158 | 2,968,102 | 7,057 | 526,301 | 1,117 | |
| 2009 | 2,662 | 856 | 936 | 990 | 2,635,200 | 23.8% | 626,934 | 1,818,009 | 2,444,943 | 2,023,386 | 421,557 | 205,377 | 918 | |
| 2010 | 2,622 | 759 | 822 | 1,000 | 2,621,558 | 27.4% | 717,236 | 1,416,703 | 2,133,940 | 1,825,960 | 307,980 | 409,256 | 814 | |
| 2011 | 2,623 | 738 | 792 | 1,010 | 2,648,784 | 30.1% | 797,224 | 1,439,764 | 2,236,988 | 1,605,837 | 631,151 | 166,073 | 853 | |
| 2012 | 2,617 | 1,194 | 1,268 | 1,020 | 2,669,152 | 32.3% | 863,072 | 2,007,539 | 2,870,611 | 2,897,254 | (26,643) | 889,715 | 1,097 | |
| 2013 | 2,603 | 1,469 | 1,544 | 1,030 | 2,681,422 | 36.3% | 973,313 | 2,514,517 | 3,487,829 | 3,178,441 | 309,388 | 663,925 | 1,340 | |
| 2014 | 2,573 | 1,246 | 1,297 | 1,040 | 2,677,023 | 41.2% | 1,101,815 | 1,774,763 | 2,876,578 | 2,861,330 | 15,248 | 1,086,567 | 1,118 | |
| 2015 | 2,530 | 1,079 | 1,112 | 1,051 | 2,658,608 | 49.7% | 1,322,373 | 1,527,986 | 2,850,359 | 1,972,587 | 877,773 | 444,600 | 1,127 | |
| 2016 | 2,509 | 960 | 980 | 1,061 | 2,662,905 | 57.3% | 1,525,758 | 984,252 | 2,510,010 | 1,977,045 | 532,965 | 992,792 | 1,000 | |
| 2017 | 2,489 | 1,085 | 1,096 | 1,072 | 2,668,095 | 69.8% | 1,861,812 | 768,576 | 2,630,388 | 2,028,988 | 601,399 | 1,260,412 | 1,057 | |
| 2018 | 2,487 | 929 | 929 | 1,083 | 2,692,611 | 90.6% | 2,438,625 | 211,847 | 2,650,471 | 1,101,470 | 1,549,001 | 889,623 | 1,066 | |
| TOTAL | 28,379 | | | | 29,226,427 | | | 12,761,519 | 16,905,757 | 29,667,275 | 24,440,399 | 5,226,877 | 7,534,642 | 1,045 |

| <u>Pure Premium Selection</u> | Trend = | 1.010 |
|-------------------------------|---------|-------|
| 3-Year Average x Latest | | 1,002 |
| 5-Year Average x Latest | | 1,083 |
| All Year Average x Latest | | 1,098 |
| Selected Pure Premium | | 1,083 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Closure
 Incurred Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT | (8) EXPECTED IBNR | (9) INCURRED LOSSES | (10) INDICATED ULTIMATE | (11) PAID LOSSES | (12) UNPAID LOSS | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|----------------|-------------------------|---------------------------|-------------------------------|------------------------|------------------------|-------------------------|-------------------------------|
| 2008 | 2,664 | 1,176 | 1,299 | 980 | 2,611,069 | 7.1% | 185,855 | 2,968,102 | 3,153,957 | 2,441,800 | 712,156 | 526,301 | 1,184 |
| 2009 | 2,662 | 856 | 936 | 990 | 2,635,200 | 6.9% | 181,183 | 2,023,386 | 2,204,569 | 1,818,009 | 386,560 | 205,377 | 828 |
| 2010 | 2,622 | 759 | 822 | 1,000 | 2,621,558 | 10.2% | 266,093 | 1,825,960 | 2,092,052 | 1,416,703 | 675,349 | 409,256 | 798 |
| 2011 | 2,623 | 738 | 792 | 1,010 | 2,648,784 | 11.5% | 303,732 | 1,605,837 | 1,909,569 | 1,439,764 | 469,805 | 166,073 | 728 |
| 2012 | 2,617 | 1,194 | 1,268 | 1,020 | 2,669,152 | 11.7% | 313,517 | 2,897,254 | 3,210,771 | 2,007,539 | 1,203,232 | 889,715 | 1,227 |
| 2013 | 2,603 | 1,469 | 1,544 | 1,030 | 2,681,422 | 14.2% | 379,747 | 3,178,441 | 3,558,188 | 2,514,517 | 1,043,672 | 663,925 | 1,367 |
| 2014 | 2,573 | 1,246 | 1,297 | 1,040 | 2,677,023 | 15.8% | 421,658 | 2,861,330 | 3,282,989 | 1,774,763 | 1,508,226 | 1,086,567 | 1,276 |
| 2015 | 2,530 | 1,079 | 1,112 | 1,051 | 2,658,608 | 18.5% | 491,053 | 1,972,587 | 2,463,640 | 1,527,986 | 935,653 | 444,600 | 974 |
| 2016 | 2,509 | 960 | 980 | 1,061 | 2,662,905 | 21.4% | 569,164 | 1,977,045 | 2,546,208 | 984,252 | 1,561,956 | 992,792 | 1,015 |
| 2017 | 2,489 | 1,085 | 1,096 | 1,072 | 2,668,095 | 29.0% | 774,998 | 2,028,988 | 2,803,987 | 768,576 | 2,035,411 | 1,260,412 | 1,127 |
| 2018 | 2,487 | 929 | 929 | 1,083 | 2,692,611 | 53.6% | 1,444,024 | 1,101,470 | 2,545,494 | 211,847 | 2,333,648 | 889,623 | 1,024 |
| TOTAL | 28,379 | | | | 29,226,427 | | 5,331,025 | 24,440,399 | 29,771,424 | 16,905,757 | 12,865,667 | 7,534,642 | 1,049 |

| <u>Pure Premium Selection</u> | Trend = | 1.010 |
|-------------------------------|---------|-------|
| 3-Year Average x Latest | | 1,002 |
| 5-Year Average x Latest | | 1,083 |
| All Year Average x Latest | | 1,098 |
| Selected Pure Premium | | 1,083 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Summary of Paid Development Method

| (1) RY | (2) PAID LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|--------------|-----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | 3,040,481 | 2,862,976 | 3,022,670 | 159,693 | 17,811 | 177,505 |
| 1995 | 3,041,597 | 2,864,027 | 2,917,052 | 53,025 | 124,545 | 177,570 |
| 1996 | 2,344,436 | 2,154,274 | 2,344,436 | 190,161 | - | 190,161 |
| 1997 | 3,877,360 | 3,626,458 | 3,703,945 | 77,487 | 173,415 | 250,902 |
| 1998 | 2,971,774 | 2,510,541 | 2,971,774 | 461,233 | - | 461,233 |
| 1999 | 2,879,192 | 2,650,903 | 2,750,103 | 99,201 | 129,089 | 228,390 |
| 2000 | 3,976,297 | 3,605,836 | 3,805,884 | 200,048 | 170,413 | 370,461 |
| 2001 | 1,107,092 | 928,198 | 1,107,092 | 178,894 | - | 178,894 |
| 2002 | 4,548,061 | 3,881,563 | 4,459,410 | 577,848 | 88,650 | 666,498 |
| 2003 | 3,372,756 | 2,817,658 | 3,223,094 | 405,438 | 149,661 | 555,098 |
| 2004 | 5,079,848 | 4,112,757 | 4,327,913 | 215,156 | 751,935 | 967,090 |
| 2005 | 2,219,551 | 1,731,576 | 1,963,983 | 232,407 | 255,568 | 487,975 |
| 2006 | 3,687,158 | 2,764,255 | 3,014,915 | 250,659 | 672,244 | 922,903 |
| 2007 | 1,114,893 | 785,680 | 867,453 | 81,773 | 247,445 | 320,218 |
| 2008 | 2,590,150 | 1,717,896 | 2,051,978 | 334,082 | 538,172 | 872,254 |
| 2009 | 1,517,751 | 917,398 | 935,849 | 18,451 | 581,903 | 600,354 |
| 2010 | 379,769 | 214,795 | 224,795 | 10,000 | 154,975 | 164,975 |
| 2011 | 1,497,560 | 724,726 | 1,497,560 | 772,834 | - | 772,834 |
| 2012 | 1,299,056 | 609,736 | 880,779 | 271,044 | 418,277 | 680,320 |
| 2013 | 1,963,414 | 799,890 | 989,033 | 189,143 | 974,381 | 1,163,524 |
| 2014 | 516,203 | 174,091 | 320,154 | 146,063 | 196,049 | 342,112 |
| 2015 | 3,797,701 | 1,282,056 | 1,769,881 | 487,823 | 2,027,820 | 2,515,643 |
| 2016 | 1,840,713 | 369,308 | 818,967 | 449,659 | 1,021,746 | 1,471,405 |
| 2017 | 1,569,257 | 199,097 | 771,193 | 572,095 | 798,064 | 1,370,159 |
| 2018 | 921,715 | 24,083 | 198,003 | 173,920 | 723,712 | 897,632 |
| TOTAL | 61,153,791 | 44,329,778 | 50,937,916 | 6,608,138 | 10,215,875 | 16,824,013 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Development of Losses to Ultimate

| | | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|------|---------|------------------------------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| RY | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | 300 - ULT | |
| 1994 | 3.760 | 1.734 | 1.593 | 1.161 | 1.131 | 1.269 | 1.382 | 1.086 | 1.093 | 1.276 | 1.062 | 1.051 | 1.033 | 1.037 | 1.032 | 1.021 | 1.022 | 1.024 | 1.014 | 1.015 | 1.001 | 1.012 | 1.007 | 1.000 | 1.062 | |
| 1995 | 2.391 | 4.177 | 1.897 | 1.678 | 1.329 | 1.060 | 1.130 | 1.071 | 1.029 | 1.053 | 1.054 | 1.140 | 1.002 | 1.054 | 1.034 | 1.094 | 1.043 | 1.081 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | |
| 1996 | 520.511 | 1.681 | 1.601 | 1.318 | 1.251 | 1.227 | 1.559 | 1.139 | 1.061 | 1.178 | 1.027 | 1.023 | 1.046 | 1.081 | 1.029 | 1.026 | 1.015 | 1.005 | 1.008 | 1.010 | 1.009 | 1.007 | 1.000 | 1.000 | 1.062 | |
| 1997 | 18.330 | 1.363 | 1.853 | 1.780 | 1.198 | 1.171 | 1.075 | 1.059 | 1.104 | 1.156 | 1.118 | 1.199 | 1.046 | 1.167 | 1.015 | 1.092 | 1.081 | 1.015 | 1.038 | 1.006 | 1.062 | 1.007 | 1.000 | 1.000 | 1.062 | |
| 1998 | 3.453 | 1.116 | 1.035 | 1.044 | 1.071 | 1.044 | 1.043 | 1.153 | 1.042 | 1.074 | 1.049 | 1.032 | 1.027 | 1.020 | 1.019 | 1.012 | 1.004 | 1.002 | 1.006 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.062 | |
| 1999 | 8.917 | 1.206 | 1.216 | 1.172 | 1.090 | 1.079 | 1.091 | 1.076 | 1.157 | 1.053 | 1.017 | 1.032 | 1.036 | 1.009 | 1.034 | 1.026 | 1.028 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.062 | | |
| 2000 | 1.729 | 1.108 | 1.687 | 1.112 | 1.158 | 1.220 | 1.100 | 1.171 | 1.005 | 1.045 | 1.023 | 1.028 | 1.025 | 1.010 | 1.033 | 1.097 | 1.051 | 1.032 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.062 | |
| 2001 | 3.256 | 2.453 | 2.032 | 1.367 | 1.642 | 1.240 | 1.180 | 1.126 | 1.054 | 1.044 | 1.077 | 1.065 | 1.072 | 1.035 | 1.077 | 1.029 | 1.032 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.062 | | |
| 2002 | 3.629 | 2.485 | 1.410 | 1.189 | 1.228 | 1.199 | 1.072 | 1.100 | 1.068 | 1.027 | 1.049 | 1.080 | 1.108 | 1.059 | 1.037 | 1.022 | 1.029 | 1.032 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.062 | |
| 2003 | 6.103 | 1.803 | 1.261 | 1.316 | 1.260 | 1.135 | 1.132 | 1.107 | 1.123 | 1.052 | 1.041 | 1.049 | 1.023 | 1.044 | 1.022 | 1.029 | 1.032 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.062 | | |
| 2004 | 5.222 | 2.259 | 1.250 | 1.104 | 1.018 | 1.046 | 1.033 | 1.054 | 1.103 | 1.033 | 1.092 | 1.032 | 1.028 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2005 | 100.428 | 1.629 | 1.471 | 1.443 | 1.147 | 1.195 | 1.128 | 1.059 | 1.101 | 1.326 | 1.038 | 1.032 | 1.029 | 1.015 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.062 | | |
| 2006 | 45.101 | 1.733 | 1.075 | 1.017 | 1.041 | 1.044 | 1.029 | 1.102 | 1.029 | 1.011 | 1.015 | 1.064 | 1.041 | 1.038 | 1.032 | 1.029 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2007 | 1.535 | 1.328 | 1.727 | 1.493 | 1.274 | 1.276 | 1.178 | 1.138 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | | |
| 2008 | 2.291 | 1.458 | 1.263 | 1.107 | 1.204 | 1.079 | 1.036 | 1.004 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2009 | 2.208 | 2.273 | 1.135 | 1.042 | 1.130 | 1.052 | 1.017 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2010 | 2.024 | 1.869 | 1.704 | 1.133 | 1.260 | 1.127 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2011 | 6.056 | 1.931 | 1.627 | 1.289 | 1.221 | 1.139 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2012 | 2.029 | 1.850 | 2.184 | 1.178 | 1.152 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2013 | 3.013 | 1.147 | 1.138 | 1.208 | 1.152 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2014 | 5.351 | 1.634 | 1.133 | 1.138 | 1.133 | 1.079 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2015 | 4.953 | 1.891 | 1.330 | 1.264 | 1.208 | 1.152 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2016 | 1.581 | 1.330 | 1.264 | 1.208 | 1.152 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2017 | 4.856 | 1.581 | 1.330 | 1.264 | 1.208 | 1.152 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.022 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | 1.000 | 1.000 | 1.000 | 1.062 | | |
| 2018 | 24.083 | 116.941 | 184.926 | 245.861 | 310.851 | 375.504 | 432.624 | 484.444 | 521.315 | 557.126 | 611.320 | 649.542 | 691.008 | 719.073 | 746.241 | 770.016 | 786.642 | 809.691 | 835.841 | 848.633 | 857.119 | 867.905 | 867.021 | 867.905 | 921.715 | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1994 | 3.760 | 1.734 | 1.593 | 1.161 | 1.131 | 1.269 | 1.382 | 1.086 | 1.093 | 1.276 | 1.062 | 1.051 | 1.033 | 1.037 | 1.032 | 1.021 | 1.022 | 1.024 | 1.014 | 1.015 | 1.001 | 1.012 | 1.007 | | |
| 1995 | 2.391 | 4.177 | 1.897 | 1.678 | 1.269 | 1.332 | 1.060 | 1.130 | 1.071 | 1.029 | 1.053 | 1.054 | 1.140 | 1.002 | 1.054 | 1.034 | 1.094 | 1.043 | 1.081 | 1.007 | 1.000 | | | | |
| 1996 | 520.511 | 1.681 | 4.601 | 1.218 | 1.251 | 1.227 | 1.559 | 1.139 | 1.061 | 1.178 | 1.027 | 1.023 | 1.046 | 1.081 | 1.029 | 1.026 | 1.015 | 1.005 | 1.008 | 1.010 | 1.009 | | | | |
| 1997 | 18.330 | 1.363 | 1.853 | 1.780 | 1.198 | 1.171 | 1.075 | 1.059 | 1.104 | 1.156 | 1.118 | 1.199 | 1.046 | 1.167 | 1.015 | 1.092 | 1.081 | 1.015 | 1.038 | | | | | | |
| 1998 | 3.453 | 1.116 | 1.026 | 1.044 | 1.071 | 1.044 | 1.043 | 1.153 | 1.042 | 1.074 | 1.049 | 1.032 | 1.027 | 1.020 | 1.019 | 1.012 | 1.004 | 1.002 | 1.006 | | | | | | |
| 1999 | 8.917 | 1.206 | 1.216 | 1.172 | 1.090 | 1.073 | 1.091 | 1.076 | 1.157 | 1.053 | 1.017 | 1.032 | 1.036 | 1.000 | 1.034 | 1.025 | 1.024 | 1.028 | | | | | | | |
| 2000 | 1.729 | 1.108 | 1.687 | 1.112 | 1.158 | 1.220 | 1.100 | 1.171 | 1.005 | 1.045 | 1.023 | 1.028 | 1.025 | 1.010 | 1.033 | 1.097 | 1.051 | | | | | | | | |
| 2001 | 3.256 | 2.453 | 2.032 | 1.367 | 1.642 | 1.240 | 1.180 | 1.126 | 1.054 | 1.044 | 1.077 | 1.079 | 1.065 | 1.072 | 1.035 | 1.077 | | | | | | | | | |
| 2002 | 3.626 | 2.485 | 1.410 | 1.189 | 1.228 | 1.199 | 1.072 | 1.100 | 1.068 | 1.027 | 1.049 | 1.080 | 1.108 | 1.059 | 1.037 | | | | | | | | | | |
| 2003 | 1.809 | 1.261 | 1.316 | 1.260 | 1.135 | 1.132 | 1.107 | 1.123 | 1.052 | 1.041 | 1.049 | 1.023 | 1.044 | | | | | | | | | | | | |
| 2004 | 6.103 | 1.250 | 1.250 | 1.104 | 1.109 | 1.018 | 1.046 | 1.033 | 1.054 | 1.103 | 1.033 | 1.092 | 1.032 | | | | | | | | | | | | |
| 2005 | 5.222 | 2.259 | 1.250 | 1.250 | 1.104 | 1.109 | 1.018 | 1.046 | 1.033 | 1.054 | 1.103 | 1.033 | 1.044 | | | | | | | | | | | | |
| 2006 | 100.428 | 1.629 | 1.471 | 1.443 | 1.147 | 1.195 | 1.128 | 1.059 | 1.101 | 1.326 | 1.291 | 1.157 | | | | | | | | | | | | | |
| 2007 | 45.101 | 1.733 | 1.075 | 1.017 | 1.041 | 1.044 | 1.029 | 1.102 | 1.028 | 1.011 | 1.015 | | | | | | | | | | | | | | |
| 2008 | 1.535 | 1.328 | 1.727 | 1.493 | 1.274 | 1.276 | 1.178 | 1.118 | 1.138 | | | | | | | | | | | | | | | | |
| 2009 | 2.291 | 1.458 | 1.263 | 1.107 | 1.204 | 1.079 | 1.036 | 1.033 | 1.004 | | | | | | | | | | | | | | | | |
| 2010 | 2.208 | 2.273 | 1.135 | 1.042 | 1.130 | 1.052 | 1.017 | | | | | | | | | | | | | | | | | | |
| 2011 | 2.002 | 2.024 | 1.869 | 1.704 | 1.133 | 1.260 | 1.127 | | | | | | | | | | | | | | | | | | |
| 2012 | 6.056 | 1.931 | 1.627 | 1.289 | 1.221 | 1.139 | | | | | | | | | | | | | | | | | | | |
| 2013 | 2.029 | 1.850 | 2.184 | 1.178 | | | | | | | | | | | | | | | | | | | | | |
| 2014 | 3.013 | 1.147 | 1.138 | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 5.351 | 1.634 | 1.133 | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 4.953 | 1.891 | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 6.437 | 1.753 | 1.218 | 1.606 | 1.177 | 1.188 | 1.072 | 1.106 | 1.061 | 1.183 | 1.145 | 1.091 | 1.050 | 1.057 | 1.035 | 1.056 | 1.020 | 1.034 | 1.009 | 1.036 | 1.006 | 1.007 | 1.007 | NA | |
| VOL WTD 5 | 7.189 | 1.791 | 1.318 | 1.569 | 1.175 | 1.179 | 1.120 | 1.091 | 1.069 | 1.117 | 1.087 | 1.087 | 1.052 | 1.043 | 1.032 | 1.040 | 1.030 | 1.034 | 1.015 | 1.031 | 1.006 | 1.007 | 1.007 | NA | |
| VOL WTD ALL | 4.856 | 1.581 | 1.330 | 1.264 | 1.208 | 1.152 | 1.157 | 1.101 | 1.084 | 1.105 | 1.063 | 1.064 | 1.053 | 1.051 | 1.040 | 1.036 | 1.029 | 1.032 | 1.015 | 1.031 | 1.006 | 1.007 | 1.007 | NA | |
| ARTH 3 | 5.152 | 2.179 | 1.377 | 1.537 | 1.177 | 1.176 | 1.072 | 1.076 | 1.050 | 1.158 | 1.113 | 1.099 | 1.054 | 1.058 | 1.035 | 1.066 | 1.026 | 1.037 | 1.010 | 1.043 | 1.006 | 1.006 | 1.007 | NA | |
| ARTH 5 | 5.152 | 2.100 | 1.525 | 1.490 | 1.156 | 1.176 | 1.104 | 1.078 | 1.061 | 1.126 | 1.086 | 1.091 | 1.051 | 1.039 | 1.032 | 1.045 | 1.037 | 1.042 | 1.017 | 1.036 | 1.006 | 1.006 | 1.007 | NA | |
| ARTH ALL | 43.594 | 1.850 | 1.626 | 1.360 | 1.225 | 1.166 | 1.156 | 1.094 | 1.076 | 1.111 | 1.064 | 1.066 | 1.059 | 1.052 | 1.043 | 1.041 | 1.035 | 1.039 | 1.017 | 1.036 | 1.006 | 1.006 | 1.007 | NA | |
| 5 YR HI LO | NA | 1.951 | 1.541 | 1.377 | 1.172 | 1.176 | 1.072 | 1.065 | 1.061 | 1.097 | 1.041 | 1.084 | 1.041 | 1.038 | 1.034 | 1.039 | 1.030 | 1.038 | 1.012 | 1.026 | 1.007 | NA | NA | NA | |
| 7 YR HI LO | 5.152 | 2.017 | 1.551 | 1.399 | 1.156 | 1.161 | 1.078 | 1.067 | 1.074 | 1.073 | 1.044 | 1.066 | 1.037 | 1.036 | 1.034 | 1.039 | 1.029 | 1.034 | 1.012 | 1.026 | 1.007 | NA | NA | NA | |
| ALL YR HI LO | 14.590 | 1.829 | 1.523 | 1.333 | 1.209 | 1.169 | 1.138 | 1.093 | 1.076 | 1.101 | 1.048 | 1.061 | 1.047 | 1.046 | 1.031 | 1.036 | 1.029 | 1.034 | 1.012 | 1.026 | 1.007 | NA | NA | NA | |
| SELECTED | 4.856 | 1.581 | 1.330 | 1.264 | 1.208 | 1.152 | 1.120 | 1.076 | 1.069 | 1.097 | 1.063 | 1.064 | 1.041 | 1.038 | 1.032 | 1.022 | 1.029 | 1.032 | 1.015 | 1.010 | 1.006 | 1.007 | 1.000 | | |

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
| 1994 | - | 67,556 | 105,762 | 224,445 | 322,720 | 593,891 | 727,102 | 973,960 | 1,223,383 | 1,680,534 | 1,736,151 | 1,783,144 | 1,901,121 | 1,985,974 | 2,108,783 | 2,229,646 | 2,353,177 | 2,416,592 | 2,500,825 | 2,575,464 | 2,617,719 | 2,729,017 | 2,757,576 | 2,813,689 |
| 1995 | 57,146 | 214,861 | 372,610 | 593,564 | 689,047 | 779,151 | 983,375 | 1,365,685 | 1,483,319 | 1,621,206 | 2,063,109 | 2,195,718 | 2,307,489 | 2,384,650 | 2,474,037 | 2,554,120 | 2,607,829 | 2,734,932 | 2,728,277 | 2,767,464 | 2,808,933 | 2,811,884 | 2,845,490 | 2,864,027 |
| 1996 | - | 17,700 | 42,316 | 176,760 | 335,328 | 562,825 | 713,987 | 950,907 | 1,008,000 | 1,138,950 | 1,219,963 | 1,255,045 | 1,321,564 | 1,392,644 | 1,587,262 | 1,590,384 | 1,676,801 | 1,734,357 | 1,897,262 | 1,979,584 | 2,130,915 | 2,154,274 | 2,154,274 | |
| 1997 | 439 | 228,598 | 384,266 | 615,310 | 810,739 | 1,014,623 | 1,245,366 | 1,941,775 | 2,211,344 | 2,345,205 | 2,763,348 | 2,836,923 | 2,901,679 | 3,033,730 | 3,280,943 | 3,376,266 | 3,462,906 | 3,516,084 | 3,532,892 | 3,559,664 | 3,594,408 | 3,626,458 | | |
| 1998 | 6,465 | 118,511 | 161,556 | 209,311 | 532,819 | 638,505 | 747,760 | 804,023 | 851,858 | 940,596 | 1,087,299 | 1,215,530 | 1,359,258 | 1,620,754 | 1,704,626 | 1,989,855 | 2,018,841 | 2,204,678 | 2,382,158 | 2,418,884 | 2,510,541 | | | |
| 1999 | 357,471 | 1,234,237 | 1,376,899 | 1,425,317 | 1,488,590 | 1,594,064 | 1,663,943 | 1,736,098 | 2,001,842 | 2,085,194 | 2,238,708 | 2,349,101 | 2,424,075 | 2,490,058 | 2,539,119 | 2,586,804 | 2,618,422 | 2,627,746 | 2,634,286 | 2,650,903 | | | | |
| 2000 | 114,187 | 1,018,212 | 1,227,938 | 1,493,269 | 1,750,358 | 1,908,405 | 2,059,006 | 2,247,037 | 2,418,072 | 2,797,303 | 2,945,750 | 2,995,130 | 3,001,814 | 3,203,887 | 3,233,491 | 3,344,627 | 3,426,721 | 3,508,911 | 3,605,836 | | | | | |
| 2001 | 104,196 | 180,134 | 199,654 | 336,731 | 374,550 | 433,710 | 529,272 | 581,958 | 681,517 | 684,727 | 715,780 | 732,297 | 771,454 | 779,324 | 805,227 | 883,218 | 928,198 | | | | | | | |
| 2002 | 39,750 | 129,433 | 317,549 | 645,166 | 881,959 | 1,448,299 | 1,795,420 | 2,119,144 | 2,385,722 | 2,515,613 | 2,626,157 | 2,827,608 | 3,051,616 | 3,249,469 | 3,483,473 | 3,604,479 | 3,881,563 | | | | | | | |
| 2003 | 70,930 | 257,387 | 639,714 | 902,054 | 1,072,965 | 1,317,164 | 1,579,451 | 1,692,868 | 1,861,811 | 1,989,247 | 2,043,300 | 2,143,512 | 2,315,479 | 2,565,592 | 2,717,089 | 2,817,658 | | | | | | | | |
| 2004 | 90,918 | 554,838 | 1,003,934 | 1,265,633 | 1,665,587 | 2,099,306 | 2,382,002 | 2,697,142 | 2,987,001 | 3,355,323 | 3,528,803 | 3,673,274 | 3,881,449 | 3,939,069 | 4,112,757 | | | | | | | | | |
| 2005 | 64,509 | 336,850 | 760,803 | 951,148 | 1,049,818 | 1,164,238 | 1,184,748 | 1,238,896 | 1,279,491 | 1,348,838 | 1,487,208 | 1,535,671 | 1,677,117 | 1,731,576 | | | | | | | | | | |
| 2006 | 2,233 | 224,290 | 365,337 | 537,313 | 775,151 | 888,935 | 1,062,080 | 1,197,945 | 1,268,221 | 1,395,888 | 1,851,282 | 2,389,601 | 2,764,255 | | | | | | | | | | | |
| 2007 | 7,065 | 318,642 | 552,262 | 593,816 | 603,938 | 628,469 | 656,318 | 675,212 | 744,229 | 765,632 | 774,413 | 785,680 | | | | | | | | | | | | |
| 2008 | - | 134,080 | 205,854 | 273,370 | 472,091 | 704,738 | 898,168 | 1,146,107 | 1,350,478 | 1,510,195 | 1,717,896 | | | | | | | | | | | | | |
| 2009 | 140,848 | 322,681 | 470,504 | 594,291 | 657,716 | 792,191 | 854,383 | 884,880 | 913,849 | 917,398 | | | | | | | | | | | | | | |
| 2010 | - | 29,916 | 66,069 | 150,177 | 170,474 | 177,574 | 200,650 | 211,147 | 214,795 | | | | | | | | | | | | | | | |
| 2011 | 34,886 | 69,855 | 141,373 | 264,278 | 450,244 | 510,173 | 642,965 | 724,726 | | | | | | | | | | | | | | | | |
| 2012 | 17,882 | 108,288 | 209,139 | 340,184 | 438,523 | 535,264 | 609,736 | | | | | | | | | | | | | | | | | |
| 2013 | - | 82,788 | 168,015 | 310,824 | 678,846 | 799,890 | | | | | | | | | | | | | | | | | | |
| 2014 | - | 44,273 | 133,384 | 153,017 | 174,091 | | | | | | | | | | | | | | | | | | | |
| 2015 | 129,482 | 692,863 | 1,132,034 | 1,282,058 | | | | | | | | | | | | | | | | | | | | |
| 2016 | 39,426 | 195,261 | 369,308 | | | | | | | | | | | | | | | | | | | | | |
| 2017 | - | 199,097 | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | | 24,083 | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Summary of Incurred Development Method

| RY | (1) INC LDM ULTIMATE | (2) PAID | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR | (7) UNPAID LOSS |
|-------|----------------------------|-------------|-------------------------|------------------------|-------------|-----------------------|
| | | | | | | |
| 1994 | 3,037,783 | 2,862,976 | 3,022,670 | 159,693 | 15,113 | 174,807 |
| 1995 | 2,945,818 | 2,864,027 | 2,917,052 | 53,025 | 28,766 | 81,791 |
| 1996 | 2,380,279 | 2,154,274 | 2,344,436 | 190,161 | 35,843 | 226,005 |
| 1997 | 3,783,030 | 3,626,458 | 3,703,945 | 77,487 | 79,085 | 156,573 |
| 1998 | 3,053,366 | 2,510,541 | 2,971,774 | 461,233 | 83,592 | 544,825 |
| 1999 | 2,848,305 | 2,650,903 | 2,750,103 | 99,201 | 98,202 | 197,402 |
| 2000 | 3,974,075 | 3,605,836 | 3,805,884 | 200,048 | 168,191 | 368,239 |
| 2001 | 1,164,580 | 928,198 | 1,107,092 | 178,894 | 57,488 | 236,381 |
| 2002 | 4,798,581 | 3,881,563 | 4,459,410 | 577,848 | 339,170 | 917,018 |
| 2003 | 3,576,030 | 2,817,658 | 3,223,096 | 405,438 | 352,934 | 758,372 |
| 2004 | 4,880,090 | 4,112,757 | 4,327,913 | 215,156 | 552,182 | 767,338 |
| 2005 | 2,312,716 | 1,731,576 | 1,963,983 | 232,407 | 348,734 | 581,140 |
| 2006 | 3,623,565 | 2,764,255 | 3,014,915 | 250,659 | 608,651 | 859,310 |
| 2007 | 1,062,164 | 785,680 | 867,453 | 81,773 | 194,711 | 276,484 |
| 2008 | 2,589,298 | 1,717,896 | 2,051,978 | 334,082 | 537,321 | 871,403 |
| 2009 | 1,227,996 | 917,398 | 935,849 | 18,451 | 292,147 | 310,598 |
| 2010 | 313,423 | 214,795 | 224,795 | 10,000 | 88,628 | 98,628 |
| 2011 | 2,180,272 | 724,726 | 1,497,560 | 772,834 | 682,712 | 1,455,546 |
| 2012 | 1,363,947 | 609,736 | 880,779 | 271,044 | 483,168 | 754,211 |
| 2013 | 1,643,998 | 799,890 | 989,033 | 189,143 | 654,963 | 844,106 |
| 2014 | 584,328 | 174,091 | 320,154 | 146,063 | 264,174 | 410,237 |
| 2015 | 3,674,600 | 1,282,058 | 1,769,881 | 487,823 | 1,904,719 | 2,392,542 |
| 2016 | 1,936,816 | 369,308 | 818,967 | 449,659 | 1,117,849 | 1,567,508 |
| 2017 | 1,921,916 | 199,097 | 771,193 | 572,095 | 1,150,723 | 1,722,818 |
| 2018 | 755,270 | 24,083 | 198,003 | 173,920 | 557,267 | 731,187 |
| TOTAL | 61,634,249 | 44,329,778 | 50,937,916 | 6,608,138 | 10,696,334 | 17,304,471 |

Missouri Petroleum Storage Tank Insurance Fund
Reserve Study as of June 30, 2018
Insurance UST - Other
Development of Losses to Ultimate

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | 300 - ULT | |
|------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | 1.005 |
| 1995 | 1.245 | 0.927 | 1.155 | 0.988 | 1.043 | 1.069 | 1.204 | 0.975 | 1.001 | 1.145 | 0.992 | 1.010 | 1.043 | 0.997 | 1.033 | 1.005 | 1.012 | 0.983 | 1.008 | 1.000 | 1.002 | 1.012 | 1.000 | 1.005 | 1.005 | |
| 1996 | 0.783 | 1.411 | 1.368 | 1.380 | 1.056 | 1.117 | 1.105 | 1.037 | 1.010 | 0.884 | 0.936 | 1.043 | 1.017 | 1.103 | 1.016 | 1.097 | 0.999 | 1.028 | 1.181 | 1.000 | 1.000 | 1.005 | 1.005 | 1.005 | | |
| 1997 | 1.860 | 1.230 | 1.198 | 1.413 | 1.137 | 1.171 | 1.111 | 1.037 | 1.003 | 0.898 | 1.016 | 0.971 | 1.084 | 1.034 | 1.005 | 1.005 | 1.002 | 1.014 | 1.002 | 1.001 | 0.997 | 1.006 | 1.005 | 1.005 | | |
| 1998 | 1.032 | 0.899 | 1.073 | 1.294 | 1.108 | 1.049 | 1.241 | 1.024 | 1.091 | 0.997 | 1.032 | 0.982 | 1.077 | 1.312 | 1.061 | 1.018 | 1.079 | 1.017 | 1.023 | 1.000 | 1.007 | 1.006 | 1.005 | 1.005 | | |
| 1999 | 1.034 | 1.090 | 1.052 | 1.039 | 1.011 | 0.999 | 1.185 | 1.022 | 1.029 | 1.061 | 1.028 | 0.999 | 0.956 | 1.005 | 0.996 | 0.999 | 0.997 | 1.000 | 1.000 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | | |
| 2000 | 1.255 | 1.096 | 1.119 | 1.055 | 1.021 | 1.028 | 1.063 | 1.049 | 1.044 | 1.051 | 1.024 | 1.026 | 1.000 | 1.014 | 0.998 | 1.028 | 1.002 | 1.029 | 1.008 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | | |
| 2001 | 0.974 | 0.874 | 1.046 | 1.005 | 1.062 | 1.075 | 0.986 | 1.015 | 0.991 | 1.000 | 1.020 | 1.034 | 1.000 | 1.000 | 1.035 | 1.007 | 1.008 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | |
| 2002 | 1.015 | 1.073 | 0.969 | 1.211 | 1.074 | 1.037 | 1.026 | 1.103 | 1.039 | 1.026 | 1.089 | 1.034 | 1.013 | 1.024 | 1.015 | 1.041 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | 1.005 | | | |
| 2003 | 0.931 | 1.129 | 1.067 | 0.881 | 1.164 | 1.048 | 1.003 | 1.017 | 0.993 | 1.093 | 1.063 | 1.007 | 0.996 | 1.012 | 1.024 | 1.031 | 1.023 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | |
| 2004 | 0.775 | 1.030 | 1.089 | 1.071 | 1.138 | 1.008 | 1.056 | 1.069 | 1.092 | 1.005 | 1.022 | 0.997 | 1.008 | 1.025 | 1.016 | 1.031 | 1.023 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | |
| 2005 | 1.822 | 1.024 | 1.042 | 0.960 | 0.988 | 1.032 | 1.023 | 1.000 | 1.013 | 1.029 | 1.038 | 1.054 | 1.034 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | |
| 2006 | 1.152 | 1.011 | 1.056 | 1.179 | 0.992 | 1.005 | 1.068 | 1.082 | 1.148 | 1.060 | 1.015 | 1.002 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2007 | 0.859 | 0.861 | 0.898 | 1.026 | 1.003 | 1.019 | 1.139 | 1.000 | 1.001 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | 1.005 | | | | |
| 2008 | 1.310 | 1.076 | 1.062 | 1.284 | 1.133 | 1.178 | 1.124 | 1.113 | 1.056 | 1.015 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2009 | 0.838 | 0.960 | 1.065 | 1.041 | 1.068 | 1.000 | 0.984 | 0.981 | 1.000 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2010 | 1.292 | 1.275 | 1.339 | 1.000 | 1.000 | 1.038 | 1.037 | 0.947 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2011 | 1.186 | 0.941 | 2.132 | 1.086 | 1.074 | 1.630 | 0.747 | 1.044 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2012 | 1.319 | 1.158 | 1.159 | 1.093 | 1.463 | 0.990 | 1.064 | 1.044 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2013 | 1.390 | 0.989 | 1.040 | 1.623 | 0.957 | 1.073 | 1.064 | 1.044 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2014 | 1.602 | 0.891 | 1.000 | 1.121 | 1.098 | 1.073 | 1.064 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | | |
| 2015 | 1.851 | 1.135 | 0.993 | 1.138 | 1.098 | 1.073 | 1.064 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | | |
| 2016 | 0.838 | 1.184 | 1.139 | 1.138 | 1.098 | 1.073 | 1.064 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | | |
| 2017 | 2.792 | 1.054 | 1.139 | 1.138 | 1.098 | 1.073 | 1.064 | 1.044 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | |
| 2018 | 1.531 | 1.054 | 1.139 | 1.138 | 1.098 | 1.073 | 1.064 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.006 | 1.005 | 1.005 | 1.005 | | | | | |
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT |
| 1994 | 65,047 | 1,005,018 | 1,023,016 | 1,087,349 | 1,499,341 | 2,078,139 | 2,525,449 | 2,944,082 | 3,003,278 | 2,995,177 | 2,924,889 | 2,550,436 | 2,574,369 | 2,688,316 | 2,614,164 | 2,736,632 | 2,714,782 | 2,772,423 | 2,896,698 | 2,963,023 | 3,116,839 | 3,142,787 | 3,022,670 | 3,022,670 | 3,037,783 | |
| 1995 | 1,345,826 | 1,675,949 | 1,553,606 | 1,794,446 | 1,722,905 | 1,840,670 | 1,976,684 | 2,379,084 | 2,318,512 | 2,321,479 | 2,635,614 | 2,661,105 | 2,775,105 | 2,765,065 | 2,856,864 | 2,870,075 | 2,905,668 | 2,855,886 | 2,879,342 | 2,882,696 | 2,917,052 | 2,931,162 | 2,945,818 | | | |
| 1996 | 634,958 | 497,443 | 701,793 | 955,776 | 1,324,610 | 1,399,259 | 1,562,675 | 1,733,459 | 1,791,890 | 1,583,674 | 1,482,276 | 1,546,632 | 1,573,321 | 1,734,904 | 1,761,831 | 1,933,421 | 1,932,111 | 1,985,403 | 3,244,436 | 3,244,436 | 2,357,036 | 2,368,437 | 2,380,279 | | | |
| 1997 | 503,583 | 925,035 | 1,150,245 | 1,378,450 | 1,947,336 | 2,318,450 | 2,891,866 | 3,288,119 | 3,098,984 | 2,987,120 | 3,265,114 | 3,219,830 | 3,221,107 | 3,492,440 | 3,610,035 | 3,626,883 | 3,643,535 | 3,651,096 | 3,700,587 | 3,708,217 | 3,713,372 | 3,720,945 | 3,726,054 | 3,746,089 | 3,752,030 | |
| 1998 | 752,604 | 776,480 | 730,505 | 823,905 | 1,065,204 | 1,181,568 | 1,239,878 | 1,538,625 | 1,576,160 | 1,719,160 | 1,733,632 | 1,735,067 | 1,803,967 | 1,856,464 | 2,452,683 | 2,602,586 | 2,649,256 | 2,857,819 | 2,905,273 | 2,971,774 | 2,991,492 | 3,009,357 | 3,025,530 | 3,040,165 | | |
| 1999 | 1,712,508 | 1,770,539 | 1,930,013 | 2,030,050 | 2,108,225 | 2,131,474 | 2,129,530 | 2,523,004 | 2,577,625 | 2,653,444 | 2,892,443 | 2,889,443 | 2,889,443 | 2,960,814 | 2,760,814 | 2,773,420 | 2,761,910 | 2,758,547 | 2,750,103 | 2,750,103 | 2,750,103 | 2,750,103 | 2,750,103 | 2,750,103 | | |
| 2000 | 1,698,608 | 2,131,795 | 2,337,379 | 2,616,121 | 2,758,703 | 2,816,918 | 2,899,853 | 3,083,798 | 3,236,082 | 3,277,739 | 3,550,236 | 3,636,238 | 3,726,236 | 3,727,592 | 3,729,290 | 3,727,662 | 3,878,829 | 3,885,389 | 3,885,389 | 3,885,389 | 3,885,389 | 3,885,389 | 3,890,996 | 3,914,231 | 3,935,268 | |
| 2001 | 903,017 | 879,435 | 768,432 | 803,398 | 807,374 | 857,373 | 921,857 | 900,000 | 922,903 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | 914,707 | | |
| 2002 | 2,102,792 | 2,135,359 | 2,359,076 | 2,220,507 | 2,690,630 | 2,888,001 | 2,995,721 | 3,073,653 | 3,390,124 | 3,520,988 | 3,614,155 | 3,934,630 | 4,066,718 | 4,119,846 | 4,218,927 | 4,281,991 | 4,459,410 | 4,561,706 | 4,595,495 | 4,633,139 | 4,667,207 | 4,698,265 | 4,726,321 | 4,751,723 | 4,774,707 | |
| 2003 | 2,188,347 | 2,037,947 | 2,300,433 | 2,453,916 | 2,612,594 | 2,638,216 | 2,645,657 | 2,689,486 | 2,699,997 | 2,798,778 | 3,102,947 | 3,124,594 | 3,115,154 | 3,149,028 | 3,221,371 | 3,223,096 | 3,399,505 | 3,424,686 | 3,452,738 | 3,478,193 | 3,501,572 | 3,522,180 | 3,541,110 | 3,558,230 | | |
| 2004 | 3,003,287 | 2,327,925 | 2,379,477 | 2,611,344 | 2,796,197 | 3,183,380 | 3,197,130 | 3,503,732 | 3,744,551 | 4,000,314 | 4,110,662 | 4,271,388 | 4,327,913 | 4,398,458 | 4,535,164 | 4,630,197 | 4,673,560 | 4,711,844 | 4,745,581 | 4,778,076 | 4,806,609 | 4,832,442 | 4,855,816 | 4,880,095 | | |
| 2005 | 855,094 | 1,558,223 | 1,595,861 | 1,662,314 | 1,596,239 | 1,577,303 | 1,664,850 | 1,665,206 | 1,687,550 | 1,705,195 | 1,809,621 | 1,899,621 | 1,963,882 | 1,989,621 | 2,051,033 | 2,084,464 | 2,149,250 | 2,198,553 | 2,214,828 | 2,232,081 | 2,240,443 | 2,264,368 | 2,277,890 | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1.245 | 0.927 | 1.155 | 0.988 | 1.043 | 1.069 | 1.204 | 0.975 | 1.001 | 1.145 | 0.992 | 1.010 | 1.043 | 0.997 | 1.033 | 1.005 | 1.012 | 0.983 | 1.008 | 1.000 | 1.002 | 1.012 | 1.000 | | |
| 1996 | 0.783 | 1.411 | 1.368 | 1.380 | 1.056 | 1.117 | 1.105 | 1.027 | 1.010 | 0.884 | 0.936 | 1.043 | 1.017 | 1.103 | 1.016 | 1.097 | 0.999 | 1.028 | 1.181 | 1.000 | 1.000 | 1.000 | | | |
| 1997 | 1.860 | 1.230 | 1.198 | 1.413 | 1.137 | 1.171 | 1.111 | 1.037 | 1.003 | 1.089 | 1.016 | 1.084 | 1.034 | 1.005 | 1.005 | 1.002 | 1.014 | 1.002 | 1.001 | 0.997 | | | | | |
| 1998 | 1.032 | 0.989 | 1.073 | 1.294 | 1.108 | 1.049 | 1.241 | 1.024 | 1.091 | 0.997 | 1.032 | 0.982 | 1.077 | 1.312 | 1.061 | 1.018 | 1.079 | 1.017 | 1.023 | 1.000 | | | | | |
| 1999 | 1.034 | 1.090 | 1.052 | 1.039 | 1.011 | 0.999 | 1.185 | 1.023 | 1.029 | 1.061 | 1.028 | 0.999 | 0.966 | 1.005 | 0.996 | 0.999 | 0.997 | 1.000 | 1.000 | | | | | | |
| 2000 | 1.255 | 1.096 | 1.119 | 1.055 | 1.021 | 1.028 | 1.063 | 1.049 | 1.044 | 1.051 | 1.024 | 1.025 | 1.000 | 1.014 | 0.988 | 1.028 | 1.002 | 0.979 | | | | | | | |
| 2001 | 0.974 | 0.874 | 1.046 | 1.005 | 1.062 | 1.075 | 0.986 | 1.015 | 0.991 | 1.000 | 1.020 | 1.034 | 1.000 | 1.109 | 1.000 | 1.000 | 1.035 | | | | | | | | |
| 2002 | 1.015 | 1.073 | 0.969 | 1.211 | 1.074 | 1.037 | 1.026 | 1.103 | 1.039 | 1.026 | 1.089 | 1.034 | 1.013 | 1.024 | 1.015 | 1.041 | | | | | | | | | |
| 2003 | 0.931 | 1.129 | 1.067 | 0.881 | 1.164 | 1.048 | 1.003 | 1.017 | 0.993 | 1.093 | 1.063 | 1.007 | 0.996 | 1.012 | 1.024 | | | | | | | | | | |
| 2004 | 0.775 | 1.030 | 1.089 | 1.071 | 1.138 | 1.004 | 1.096 | 1.069 | 1.092 | 1.005 | 1.022 | 0.997 | 1.008 | 1.025 | | | | | | | | | | | |
| 2005 | 1.822 | 1.024 | 1.042 | 0.960 | 0.988 | 1.032 | 1.023 | 1.000 | 1.013 | 1.029 | 1.038 | 1.054 | 1.034 | | | | | | | | | | | | |
| 2006 | 1.152 | 1.011 | 1.056 | 1.179 | 0.992 | 1.005 | 1.068 | 1.082 | 1.148 | 1.060 | 1.015 | | | | | | | | | | | | | | |
| 2007 | 0.859 | 0.861 | 0.898 | 1.026 | 1.003 | 1.019 | 1.041 | 1.139 | 1.000 | 1.000 | 1.000 | | | | | | | | | | | | | | |
| 2008 | 1.310 | 1.076 | 1.062 | 1.284 | 1.133 | 1.178 | 1.124 | 1.113 | 1.056 | 1.015 | | | | | | | | | | | | | | | |
| 2009 | 0.838 | 0.960 | 1.065 | 1.041 | 1.068 | 1.009 | 0.984 | 0.981 | 1.000 | 1.037 | 0.947 | | | | | | | | | | | | | | |
| 2010 | 1.292 | 1.275 | 1.339 | 1.000 | 1.000 | 1.038 | 1.037 | 1.047 | | | | | | | | | | | | | | | | | |
| 2011 | 1.186 | 0.941 | 2.132 | 1.086 | 1.074 | 1.630 | 0.747 | | | | | | | | | | | | | | | | | | |
| 2012 | 1.319 | 1.158 | 1.159 | 1.093 | 1.463 | | | | | | | | | | | | | | | | | | | | |
| 2013 | 1.390 | 0.989 | 1.040 | 1.623 | 0.957 | | | | | | | | | | | | | | | | | | | | |
| 2014 | 1.602 | 0.891 | 1.000 | 1.121 | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 1.851 | 1.135 | 0.993 | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 0.838 | 1.184 | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 2.792 | | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 1.555 | 1.118 | 1.005 | 1.327 | 1.116 | 1.331 | 0.839 | 1.057 | 1.029 | 1.035 | 1.020 | 1.010 | 1.009 | 1.021 | 1.016 | 1.031 | 1.005 | 0.997 | 1.008 | 1.001 | 1.000 | 1.006 | 1.000 | NA | |
| VOL WTD 5 | 1.531 | 1.100 | 1.178 | 1.208 | 1.098 | 1.220 | 0.946 | 1.077 | 1.063 | 1.023 | 1.031 | 1.015 | 1.010 | 1.025 | 1.008 | 1.023 | 1.018 | 1.005 | 1.032 | 1.000 | 1.006 | 1.000 | 1.000 | NA | |
| VOL WTD ALL | 1.117 | 1.054 | 1.093 | 1.109 | 1.073 | 1.073 | 1.064 | 1.044 | 1.040 | 1.040 | 1.027 | 1.010 | 1.018 | 1.044 | 1.016 | 1.023 | 1.015 | 1.001 | 1.032 | 1.000 | 1.006 | 1.000 | 1.000 | NA | |
| ARTH 3 | 1.827 | 1.070 | 1.011 | 1.279 | 1.165 | 1.219 | 0.923 | 1.014 | 1.019 | 1.025 | 1.018 | 1.018 | 1.013 | 1.020 | 1.013 | 1.023 | 1.011 | 0.999 | 1.008 | 1.001 | 1.006 | 1.000 | 1.000 | NA | |
| ARTH 5 | 1.694 | 1.071 | 1.265 | 1.185 | 1.112 | 1.169 | 0.987 | 1.053 | 1.043 | 1.022 | 1.028 | 1.019 | 1.010 | 1.037 | 1.007 | 1.017 | 1.023 | 1.007 | 1.043 | 1.000 | 1.006 | 1.000 | 1.000 | NA | |
| ARTH ALL | 1.268 | 1.062 | 1.139 | 1.138 | 1.079 | 1.083 | 1.061 | 1.038 | 1.034 | 1.032 | 1.021 | 1.013 | 1.021 | 1.063 | 1.016 | 1.024 | 1.018 | 1.003 | 1.043 | 1.000 | 1.006 | 1.000 | 1.000 | NA | |
| 5 YR HI LO | 1.614 | 1.094 | 1.066 | 1.100 | 1.047 | 1.075 | 1.021 | 1.059 | 1.023 | 1.016 | 1.025 | 1.014 | 1.007 | 1.021 | 1.004 | 1.015 | 1.013 | 1.010 | 1.011 | 1.000 | NA | NA | NA | | |
| 7 YR HI LO | 1.470 | 1.081 | 1.121 | 1.125 | 1.055 | 1.050 | 1.031 | 1.049 | 1.032 | 1.027 | 1.032 | 1.020 | 1.003 | 1.037 | 1.008 | 1.018 | 1.010 | 1.003 | 1.011 | 1.000 | NA | NA | NA | | |
| ALL YR HI LO | 1.219 | 1.054 | 1.100 | 1.125 | 1.063 | 1.055 | 1.070 | 1.037 | 1.029 | 1.036 | 1.023 | 1.013 | 1.021 | 1.041 | 1.013 | 1.016 | 1.010 | 1.003 | 1.011 | 1.000 | NA | NA | NA | | |
| SELECTED | 1.531 | 1.054 | 1.139 | 1.138 | 1.098 | 1.073 | 1.064 | 1.044 | 1.063 | 1.040 | 1.031 | 1.019 | 1.021 | 1.044 | 1.016 | 1.031 | 1.023 | 1.007 | 1.008 | 1.007 | 1.007 | 1.006 | 1.005 | 1.005 | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance UST - Other
 Incurred Losses

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
| 1994 | 65,047 | 1,005,018 | 1,023,016 | 1,087,349 | 1,499,341 | 2,078,139 | 2,573,685 | 2,925,449 | 2,944,082 | 3,003,278 | 2,995,177 | 2,924,880 | 2,550,436 | 2,574,369 | 2,688,316 | 2,614,164 | 2,736,632 | 2,714,782 | 2,772,423 | 2,896,698 | 2,962,023 | 3,116,839 | 3,142,787 | 3,022,670 |
| 1995 | 1,345,826 | 1,675,949 | 1,553,606 | 1,794,446 | 1,772,905 | 1,849,070 | 1,976,684 | 2,379,084 | 2,318,512 | 2,321,479 | 2,657,629 | 2,635,614 | 2,661,105 | 2,715,105 | 2,766,065 | 2,856,864 | 2,870,975 | 2,906,668 | 2,855,886 | 2,879,342 | 2,878,011 | 2,883,696 | 2,917,052 | 2,917,052 |
| 1996 | 634,958 | 497,443 | 701,793 | 950,776 | 1,324,610 | 1,399,259 | 1,562,675 | 1,726,825 | 1,773,459 | 1,791,890 | 1,583,674 | 1,482,276 | 1,546,632 | 1,573,321 | 1,734,904 | 1,761,831 | 1,933,421 | 1,932,111 | 1,985,403 | 2,344,436 | 2,344,436 | 2,344,436 | 2,344,436 | |
| 1997 | 502,583 | 935,032 | 1,150,245 | 1,378,150 | 1,947,336 | 2,214,227 | 2,591,866 | 2,880,119 | 2,986,984 | 2,997,120 | 3,265,114 | 3,318,830 | 3,221,107 | 3,492,440 | 3,610,025 | 3,626,582 | 3,643,635 | 3,651,098 | 3,700,587 | 3,708,217 | 3,713,372 | 3,703,945 | | |
| 1998 | 752,604 | 776,480 | 767,994 | 823,905 | 1,066,204 | 1,181,568 | 1,239,878 | 1,538,625 | 1,576,160 | 1,719,015 | 1,713,492 | 1,768,332 | 1,735,967 | 1,869,464 | 2,452,683 | 2,602,586 | 2,640,256 | 2,857,819 | 2,905,273 | 2,970,679 | 2,971,774 | | | |
| 1999 | 1,712,508 | 1,770,639 | 1,930,013 | 2,030,050 | 2,108,225 | 2,131,472 | 2,129,530 | 2,523,004 | 2,577,625 | 2,653,444 | 2,814,130 | 2,892,443 | 2,889,189 | 2,760,814 | 2,773,420 | 2,761,510 | 2,755,547 | 2,750,103 | 2,750,103 | 2,750,103 | 2,750,103 | 2,750,103 | | |
| 2000 | 1,698,508 | 2,131,795 | 2,327,379 | 2,616,123 | 2,758,703 | 2,816,918 | 2,899,853 | 3,083,798 | 3,236,082 | 3,377,793 | 3,550,236 | 3,636,238 | 3,726,554 | 3,725,592 | 3,779,290 | 3,773,562 | 3,878,829 | 3,886,354 | 3,805,884 | | | | | |
| 2001 | 903,017 | 879,435 | 768,432 | 803,394 | 807,374 | 857,373 | 921,857 | 909,006 | 922,903 | 914,707 | 914,707 | 932,652 | 964,133 | 1,069,609 | 1,069,609 | 1,069,609 | 1,069,609 | 1,107,092 | | | | | | |
| 2002 | 2,102,792 | 2,135,359 | 2,291,076 | 2,220,507 | 2,690,036 | 2,888,001 | 2,995,721 | 3,073,653 | 3,390,124 | 3,520,989 | 3,614,155 | 3,934,639 | 4,066,718 | 4,119,846 | 4,218,927 | 4,281,991 | 4,459,410 | | | | | | | |
| 2003 | 2,188,347 | 2,037,947 | 2,300,433 | 2,453,916 | 2,162,594 | 2,516,185 | 2,638,216 | 2,645,657 | 2,689,486 | 2,660,997 | 2,918,788 | 3,102,947 | 3,124,594 | 3,111,514 | 3,149,028 | 3,223,096 | | | | | | | | |
| 2004 | 3,003,287 | 2,327,925 | 2,398,477 | 2,611,344 | 2,796,197 | 3,183,380 | 3,197,130 | 3,503,732 | 3,744,551 | 4,090,314 | 4,110,662 | 4,200,197 | 4,188,550 | 4,221,388 | 4,327,913 | | | | | | | | | |
| 2005 | 855,094 | 1,558,332 | 1,595,861 | 1,662,314 | 1,596,329 | 1,577,303 | 1,627,822 | 1,664,850 | 1,665,200 | 1,687,550 | 1,736,223 | 1,801,967 | 1,899,621 | 1,963,983 | | | | | | | | | | |
| 2006 | 1,458,736 | 1,680,496 | 1,698,579 | 1,793,328 | 2,114,309 | 2,096,877 | 2,106,813 | 2,250,803 | 2,435,160 | 2,795,151 | 2,963,704 | 3,008,941 | 3,014,915 | | | | | | | | | | | |
| 2007 | 1,049,030 | 901,475 | 776,584 | 697,298 | 715,705 | 717,904 | 731,520 | 761,453 | 867,453 | 867,453 | 867,453 | 867,453 | | | | | | | | | | | | |
| 2008 | 596,136 | 781,142 | 840,868 | 893,113 | 1,147,030 | 1,299,395 | 1,530,368 | 1,720,312 | 1,915,158 | 2,021,967 | 2,051,978 | | | | | | | | | | | | | |
| 2009 | 1,008,223 | 844,876 | 811,301 | 864,241 | 899,372 | 960,149 | 968,896 | 953,538 | 935,849 | 935,849 | | | | | | | | | | | | | | |
| 2010 | 100,002 | 120,253 | 164,798 | 220,645 | 220,645 | 220,645 | 228,932 | 237,342 | 224,795 | | | | | | | | | | | | | | | |
| 2011 | 443,503 | 526,138 | 494,996 | 1,055,259 | 1,146,204 | 1,230,702 | 2,005,572 | 1,497,560 | | | | | | | | | | | | | | | | |
| 2012 | 314,431 | 414,642 | 480,020 | 556,332 | 607,983 | 889,634 | 880,779 | | | | | | | | | | | | | | | | | |
| 2013 | 445,007 | 618,612 | 611,639 | 636,393 | 1,032,995 | 989,033 | | | | | | | | | | | | | | | | | | |
| 2014 | 200,006 | 320,413 | 285,522 | 285,522 | 320,154 | | | | | | | | | | | | | | | | | | | |
| 2015 | 848,506 | 1,570,384 | 1,782,239 | 1,769,881 | | | | | | | | | | | | | | | | | | | | |
| 2016 | 825,402 | 691,547 | 818,967 | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 276,254 | 771,193 | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 198,003 | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Insurance UST - Other

Determination of Pure Premium

| (1) RY | (2) PAID LDM ULTIMATE | (3) INC LDM ULTIMATE | (4) SELECTED ULTIMATE | (5) POLICIES IN FORCE | (6) PURE PREMIUM |
|--------------|-----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------|
| 2008 | 2,590,150 | 2,589,298 | 2,589,724 | 2,664 | 972 |
| 2009 | 1,517,751 | 1,227,996 | 1,372,873 | 2,662 | 516 |
| 2010 | 379,769 | 313,423 | 346,596 | 2,622 | 132 |
| 2011 | 1,497,560 | 2,180,272 | 2,180,272 | 2,623 | 831 |
| 2012 | 1,299,056 | 1,363,947 | 1,363,947 | 2,617 | 521 |
| 2013 | 1,963,414 | 1,643,996 | 1,643,996 | 2,603 | 632 |
| 2014 | 516,203 | 584,328 | 584,328 | 2,573 | 227 |
| 2015 | 3,797,701 | 3,674,600 | 3,674,600 | 2,530 | 1,452 |
| 2016 | 1,840,713 | 1,936,816 | 1,936,816 | 2,509 | 772 |
| 2017 | 1,569,257 | 1,921,916 | 1,921,916 | 2,489 | 772 |
| 2018 | 921,715 | 755,270 | 755,270 | 2,487 | 304 |
| TOTAL | 17,893,289 | 18,191,862 | 18,370,339 | 28,379 | 647 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Insurance UST - Other

Paid Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT UNPAID | (8) EXPECTED UNPAID | (9) PAID LOSSES | (10) INDICATED ULTIMATE | (11) INCURRED LOSSES | (12) IBNR RESERVE | (13) CASE RESERVE | (14) ULTIMATE PURE PREM | |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|--------------------------|---------------------------|-----------------------|-------------------------------|----------------------------|-------------------------|-------------------------|-------------------------------|-----|
| 2008 | 2,664 | 972 | 1,074 | 718 | 1,911,928 | 33.7% | 643,857 | 1,717,896 | 2,361,753 | 2,051,978 | 309,776 | 334,082 | 887 | |
| 2009 | 2,662 | 516 | 564 | 725 | 1,929,598 | 39.6% | 763,261 | 917,398 | 1,680,659 | 935,849 | 744,810 | 18,451 | 631 | |
| 2010 | 2,622 | 132 | 143 | 732 | 1,919,609 | 43.4% | 833,893 | 214,795 | 1,048,687 | 224,795 | 823,893 | 10,000 | 400 | |
| 2011 | 2,623 | 831 | 891 | 739 | 1,939,544 | 47.4% | 920,140 | 724,726 | 1,644,865 | 1,497,560 | 147,306 | 772,834 | 627 | |
| 2012 | 2,617 | 521 | 553 | 747 | 1,954,459 | 53.1% | 1,037,098 | 609,736 | 1,646,834 | 880,779 | 766,054 | 271,044 | 629 | |
| 2013 | 2,603 | 632 | 664 | 754 | 1,963,443 | 59.3% | 1,163,542 | 799,890 | 1,963,432 | 989,033 | 974,398 | 189,143 | 754 | |
| 2014 | 2,573 | 227 | 236 | 762 | 1,960,222 | 66.3% | 1,299,133 | 174,091 | 1,473,223 | 320,154 | 1,153,069 | 146,063 | 573 | |
| 2015 | 2,530 | 1,452 | 1,496 | 769 | 1,946,738 | 73.3% | 1,427,460 | 1,282,058 | 2,709,518 | 1,769,881 | 939,637 | 487,823 | 1,071 | |
| 2016 | 2,509 | 772 | 787 | 777 | 1,949,885 | 79.9% | 1,558,674 | 369,308 | 1,927,981 | 818,967 | 1,109,015 | 449,659 | 768 | |
| 2017 | 2,489 | 772 | 780 | 785 | 1,953,685 | 87.3% | 1,705,814 | 199,097 | 1,904,911 | 771,193 | 1,133,719 | 572,095 | 765 | |
| 2018 | 2,487 | 304 | 304 | 793 | 1,971,636 | 97.4% | 1,920,121 | 24,083 | 1,944,204 | 198,003 | 1,746,201 | 173,920 | 782 | |
| TOTAL | 28,379 | | | | 21,400,748 | | | 13,272,992 | 7,033,075 | 20,306,068 | 10,458,190 | 9,847,877 | 3,425,115 | 716 |

Pure Premium Selection

Trend = 1.010

| | |
|---------------------------|-------|
| 3-Year Average x Latest | 1,021 |
| 5-Year Average x Latest | 793 |
| All Year Average x Latest | 719 |
| Selected Pure Premium | 793 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Insurance UST - Other

Incurred Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT IBNR | (8) EXPECTED IBNR | (9) INCURRED LOSSES | (10) INDICATED ULTIMATE | (11) PAID LOSSES | (12) UNPAID LOSS | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|------------------------|-------------------------|---------------------------|-------------------------------|------------------------|------------------------|-------------------------|-------------------------------|
| 2008 | 2,664 | 972 | 1,074 | 718 | 1,911,928 | 20.8% | 396,756 | 2,051,978 | 2,448,733 | 1,717,896 | 730,838 | 334,082 | 919 |
| 2009 | 2,662 | 516 | 564 | 725 | 1,929,598 | 23.8% | 459,062 | 935,849 | 1,394,911 | 917,398 | 477,513 | 18,451 | 524 |
| 2010 | 2,622 | 132 | 143 | 732 | 1,919,609 | 28.3% | 542,818 | 224,795 | 767,613 | 214,795 | 552,818 | 10,000 | 293 |
| 2011 | 2,623 | 831 | 891 | 739 | 1,939,544 | 31.3% | 607,333 | 1,497,560 | 2,104,893 | 724,726 | 1,380,167 | 772,834 | 802 |
| 2012 | 2,617 | 521 | 553 | 747 | 1,954,459 | 35.4% | 692,352 | 880,779 | 1,573,131 | 609,736 | 963,396 | 271,044 | 601 |
| 2013 | 2,603 | 632 | 664 | 754 | 1,963,443 | 39.8% | 782,229 | 989,033 | 1,771,263 | 799,890 | 971,373 | 189,143 | 680 |
| 2014 | 2,573 | 227 | 236 | 762 | 1,960,222 | 45.2% | 886,215 | 320,154 | 1,206,369 | 174,091 | 1,032,278 | 146,063 | 469 |
| 2015 | 2,530 | 1,452 | 1,496 | 769 | 1,946,738 | 51.8% | 1,009,086 | 1,769,881 | 2,778,967 | 1,282,058 | 1,496,910 | 487,823 | 1,098 |
| 2016 | 2,509 | 772 | 787 | 777 | 1,949,885 | 57.7% | 1,125,392 | 818,967 | 1,944,359 | 369,308 | 1,575,051 | 449,659 | 775 |
| 2017 | 2,489 | 772 | 780 | 785 | 1,953,685 | 59.9% | 1,169,745 | 771,193 | 1,940,937 | 199,097 | 1,741,840 | 572,095 | 780 |
| 2018 | 2,487 | 304 | 304 | 793 | 1,971,636 | 73.8% | 1,454,748 | 198,003 | 1,652,751 | 24,083 | 1,628,669 | 173,920 | 665 |
| TOTAL | 28,379 | | | | 21,400,748 | | 9,125,737 | 10,458,190 | 19,583,927 | 7,033,075 | 12,550,852 | 3,425,115 | 690 |

Pure Premium Selection

Trend = 1.010

| | |
|---------------------------|-------|
| 3-Year Average x Latest | 1,021 |
| 5-Year Average x Latest | 793 |
| All Year Average x Latest | 719 |
| Selected Pure Premium | 793 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Summary of Paid Development Method

| RY | (1) PAID LDM ULTIMATE | (2) PAID | (3) INCURRED LOSS | (4) CASE LOSS | (5) IBNR RESERVE | (6) UNPAID RESERVE | (7) LOSS |
|-------|-----------------------------|-------------|-------------------------|---------------------|------------------------|--------------------------|-------------|
| | | | | | | | |
| 1994 | - | - | - | 114,027 | - | - | - |
| 1995 | 114,027 | 114,027 | - | 114,027 | - | - | - |
| 1996 | 67,307,776 | 60,833,532 | 67,307,776 | 6,330,317 | 210,677 | 6,340,993 | - |
| 1997 | 8,930,441 | 8,465,789 | 8,930,441 | 8,602,233 | 294,388 | 889,852 | - |
| 1998 | 18,971,581 | 16,793,391 | 18,971,581 | 2,179,191 | - | 2,179,191 | - |
| 1999 | 8,377,010 | 7,276,048 | 8,039,539 | 763,491 | 337,471 | 1,100,063 | - |
| 2000 | 14,987,967 | 12,582,946 | 14,987,967 | 2,404,021 | - | 2,404,021 | - |
| 2001 | 3,425,000 | 2,135,112 | 3,425,000 | 1,289,889 | - | 1,289,889 | - |
| 2002 | 3,382,181 | 2,737,830 | 3,340,765 | 602,935 | 41,416 | 644,351 | - |
| 2003 | 1,174,225 | 925,666 | 1,107,023 | 181,959 | 67,200 | 249,159 | - |
| 2004 | 2,037,947 | 1,508,295 | 2,037,947 | 529,652 | - | 529,652 | - |
| 2005 | 3,164,235 | 2,334,050 | 2,776,623 | 444,573 | 385,612 | 830,185 | - |
| 2006 | 533,938 | 300,938 | 533,938 | 233,000 | - | 233,000 | - |
| 2007 | 1,560,892 | 1,076,420 | 1,302,593 | 226,173 | 258,299 | 484,473 | - |
| 2008 | 966,979 | 615,335 | 634,174 | 18,839 | 332,805 | 351,644 | - |
| 2009 | 1,046,534 | 659,457 | 774,343 | 16,435 | 290,392 | 407,977 | - |
| 2010 | 886,609 | 485,492 | 886,609 | 401,317 | - | 401,317 | - |
| 2011 | 1,773,194 | 904,905 | 1,773,194 | 868,290 | - | 868,290 | - |
| 2012 | 522,057 | 271,398 | 360,480 | 89,082 | 161,578 | 250,659 | - |
| 2013 | 1,311,204 | 636,244 | 1,061,991 | 425,747 | 249,213 | 674,960 | - |
| 2014 | 1,193,782 | 548,829 | 731,229 | 182,405 | 462,554 | 644,953 | - |
| 2015 | 225,947 | 91,292 | 222,633 | 131,341 | 3,314 | 134,655 | - |
| 2016 | 985,060 | 350,684 | 868,811 | 518,127 | 116,249 | 634,376 | - |
| 2017 | 1,262,204 | 295,863 | 662,913 | 367,050 | 599,291 | 966,340 | - |
| 2018 | 1,347,600 | 73,995 | 582,223 | 508,627 | 765,378 | 1,274,005 | - |
| TOTAL | 145,582,991 | 121,591,186 | 141,007,156 | 19,415,570 | 4,575,835 | 23,991,805 | - |

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | | | | | ULT |
|------|------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|-------|
| | 12-24 | 24-36 | 36-48 | 48-60 | 60-72 | 72-84 | 84-96 | 96-108 | 108-120 | 120-132 | 132-144 | 144-156 | 156-168 | 168-180 | 180-192 | 192-204 | 204-216 | 216-228 | 228-240 | 240-252 | 252-264 | 264-276 | 276-288 | 288-300 | 300-ULT | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1.073 |
| 1995 | 20.724 | 3,266 | 2,407 | 2,036 | 1,409 | 1,264 | 1,161 | 1,143 | 1,103 | 1,082 | 1,127 | 1,000 | 1,241 | 1,000 | 1,041 | 1,014 | 1,069 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1.073 | |
| 1996 | 16,836 | 2,069 | 1,602 | 1,346 | 1,153 | 1,041 | 1,049 | 1,041 | 1,041 | 1,041 | 1,173 | 1,040 | 1,059 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1,040 | 1.073 | |
| 1997 | 12,647 | 2,010 | 1,342 | 1,276 | 1,074 | 1,033 | 1,029 | 1,071 | 1,035 | 1,060 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1,056 | 1,031 | 1.073 | |
| 1998 | 4,821 | 1,254 | 1,276 | 1,187 | 1,132 | 1,094 | 1,044 | 1,039 | 1,066 | 1,103 | 1,056 | 1,056 | 1,033 | 1,056 | 1,033 | 1,056 | 1,033 | 1,056 | 1,033 | 1,056 | 1,033 | 1,056 | 1,033 | 1,056 | 1,033 | 1,056 | 1,033 | 1.073 | |
| 1999 | 2,319 | 1,409 | 1,202 | 1,169 | 1,115 | 1,077 | 1,140 | 1,034 | 1,054 | 1,044 | 1,028 | 1,027 | 1,031 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,030 | 1,027 | 1,025 | 1,030 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1.073 | |
| 2000 | 2,324 | 1,368 | 1,246 | 1,120 | 1,179 | 1,166 | 1,155 | 1,112 | 1,047 | 1,053 | 1,037 | 1,017 | 1,018 | 1,009 | 1,043 | 1,065 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1,010 | 1,010 | 1,010 | 1.073 | |
| 2001 | 10,139 | 2,111 | 1,125 | 1,147 | 1,072 | 1,092 | 1,039 | 1,043 | 1,094 | 1,033 | 1,046 | 1,078 | 1,043 | 1,070 | 1,090 | 1,065 | 1,025 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1,010 | 1,010 | 1.073 | |
| 2002 | 2,817 | 1,576 | 1,195 | 1,149 | 1,129 | 1,151 | 1,063 | 1,049 | 1,089 | 1,032 | 1,076 | 1,029 | 1,063 | 1,058 | 1,049 | 1,028 | 1,025 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1,010 | 1,010 | 1.073 | |
| 2003 | 4,773 | 1,326 | 1,368 | 1,217 | 1,138 | 1,111 | 1,059 | 1,037 | 1,046 | 1,032 | 1,043 | 1,015 | 1,037 | 1,036 | 1,031 | 1,028 | 1,025 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1,010 | 1,010 | 1.073 | |
| 2004 | 3,426 | 1,446 | 1,590 | 1,161 | 1,212 | 1,132 | 1,037 | 1,039 | 1,095 | 1,041 | 1,261 | 1,036 | 1,008 | 1,036 | 1,031 | 1,028 | 1,025 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1,010 | 1,010 | 1.073 | |
| 2005 | 4,337 | 3,865 | 1,419 | 1,348 | 1,051 | 1,042 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1.073 | |
| 2006 | 41,628 | 3,049 | 1,218 | 1,215 | 1,257 | 1,101 | 1,081 | 1,141 | 1,098 | 1,002 | 1,068 | 1,045 | 1,015 | 1,032 | 1,036 | 1,036 | 1,028 | 1,025 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1,010 | 1.073 | |
| 2007 | 1,519 | 1,048 | 1,204 | 1,247 | 1,256 | 1,030 | 1,086 | 1,045 | 1,015 | 1,032 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1.073 | | |
| 2008 | 3,022 | 1,570 | 1,139 | 1,055 | 1,015 | 1,097 | 1,034 | 1,018 | 1,058 | 1,027 | 1,084 | 1,032 | 1,036 | 1,036 | 1,036 | 1,036 | 1,028 | 1,025 | 1,020 | 1,027 | 1,019 | 1,016 | 1,014 | 1,012 | 1,010 | 1,010 | 1.073 | | |
| 2009 | 1,831 | 1,051 | 1,053 | 1,047 | 1,050 | 1,071 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1.073 | |
| 2010 | 2,766 | 1,844 | 1,117 | 1,100 | 1,081 | 1,076 | 1,034 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1,056 | 1.073 | |
| 2011 | 13,380 | 1,407 | 1,134 | 1,061 | 1,063 | 1,086 | 1,044 | 1,066 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | |
| 2012 | 5,111 | 1,534 | 1,499 | 1,181 | 1,057 | 1,071 | 1,064 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | |
| 2013 | 13,888 | 1,678 | 1,154 | 1,132 | 1,055 | 1,071 | 1,064 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | | |
| 2014 | 2,243 | 1,078 | 1,138 | 1,055 | 1,071 | 1,064 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | | |
| 2015 | 1,519 | 1,159 | 1,135 | 1,138 | 1,055 | 1,071 | 1,064 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | | |
| 2016 | 2,086 | 1,519 | 1,135 | 1,138 | 1,055 | 1,071 | 1,064 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | | |
| 2017 | 4,292 | 1,519 | 1,135 | 1,138 | 1,055 | 1,071 | 1,064 | 1,046 | 1,071 | 1,027 | 1,084 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1,036 | 1.073 | | |
| 2018 | 73,595 | 315,881 | 479,749 | 544,487 | 619,545 | 653,905 | 700,567 | 745,302 | 779,825 | 835,161 | 857,542 | 929,330 | 959,394 | 994,037 | 1,029,599 | 1,061,653 | 1,090,864 | 1,117,873 | 1,139,779 | 1,170,490 | 1,192,860 | 1,212,210 | 1,228,905 | 1,243,276 | 1,255,623 | 1,347,600 | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|--|--|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | | | |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 20.724 | 3.266 | 2.407 | 2.036 | 1.409 | 1.264 | 1.161 | 1.143 | 1.103 | 1.082 | 1.072 | 1.051 | 1.061 | 1.043 | 1.032 | 1.031 | 1.021 | 1.035 | 1.021 | 1.023 | 1.023 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| 1996 | 18.836 | 2.049 | 1.602 | 1.266 | 1.153 | 1.071 | 1.019 | 1.041 | 1.011 | 1.021 | 1.009 | 1.027 | 1.030 | 1.045 | 1.018 | 1.013 | 1.006 | 1.012 | 1.012 | 1.008 | 1.029 | | | | | | |
| 1997 | 12.647 | 2.010 | 1.42 | 1.05 | 1.074 | 1.053 | 1.029 | 1.071 | 1.035 | 1.060 | 1.051 | 1.058 | 1.031 | 1.025 | 1.017 | 1.039 | 1.019 | 1.020 | 1.012 | 1.012 | 1.018 | | | | | | |
| 1998 | 4.821 | 1.254 | 1.276 | 1.187 | 1.132 | 1.024 | 1.044 | 1.039 | 1.066 | 1.103 | 1.032 | 1.019 | 1.056 | 1.020 | 1.016 | 1.012 | 1.013 | 1.023 | 1.023 | 1.018 | | | | | | | |
| 1999 | 2.319 | 1.409 | 1.202 | 1.169 | 1.115 | 1.077 | 1.140 | 1.034 | 1.054 | 1.044 | 1.028 | 1.027 | 1.031 | 1.030 | 1.030 | 1.027 | 1.025 | 1.025 | 1.030 | | | | | | | | |
| 2000 | 3.234 | 1.268 | 1.346 | 1.120 | 1.179 | 1.166 | 1.155 | 1.112 | 1.047 | 1.052 | 1.037 | 1.017 | 1.018 | 1.009 | 1.043 | 1.065 | | | | | | | | | | | |
| 2001 | 10.139 | 2.111 | 1.125 | 1.147 | 1.072 | 1.092 | 1.039 | 1.043 | 1.094 | 1.033 | 1.046 | 1.046 | 1.032 | 1.078 | 1.043 | 1.070 | 1.090 | 1.065 | | | | | | | | | |
| 2002 | 2.817 | 1.576 | 1.195 | 1.149 | 1.129 | 1.151 | 1.063 | 1.049 | 1.089 | 1.032 | 1.076 | 1.029 | 1.063 | 1.058 | 1.049 | | | | | | | | | | | | |
| 2003 | 4.773 | 1.326 | 1.368 | 1.217 | 1.136 | 1.111 | 1.059 | 1.037 | 1.046 | 1.032 | 1.043 | 1.015 | 1.037 | 1.036 | | | | | | | | | | | | | |
| 2004 | 3.426 | 1.446 | 1.590 | 1.161 | 1.212 | 1.132 | 1.037 | 1.039 | 1.095 | 1.041 | 1.261 | 1.036 | 1.008 | | | | | | | | | | | | | | |
| 2005 | 4.337 | 3.865 | 1.419 | 1.348 | 1.051 | 1.042 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | | | | | | | |
| 2006 | 41.628 | 3.049 | 1.218 | 1.215 | 1.257 | 1.101 | 1.081 | 1.141 | 1.098 | 1.002 | 1.068 | | | | | | | | | | | | | | | | |
| 2007 | 4.194 | 1.048 | 1.20 | 1.247 | 1.256 | 1.030 | 1.086 | 1.045 | 1.015 | 1.032 | | | | | | | | | | | | | | | | | |
| 2008 | 3.022 | 1.570 | 1.139 | 1.055 | 1.015 | 1.097 | 1.034 | 1.018 | 1.054 | | | | | | | | | | | | | | | | | | |
| 2009 | 2.003 | 1.555 | 1.111 | 1.053 | 1.07 | 1.069 | 1.179 | 1.088 | | | | | | | | | | | | | | | | | | | |
| 2010 | 2.766 | 1.844 | 1.117 | 1.100 | 1.081 | 1.076 | 1.034 | | | | | | | | | | | | | | | | | | | | |
| 2011 | 13.380 | 1.407 | 1.134 | 1.101 | 1.063 | 1.086 | | | | | | | | | | | | | | | | | | | | | |
| 2012 | 5.111 | 1.534 | 1.499 | 1.181 | 1.057 | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | 13.888 | 1.678 | 1.154 | 1.132 | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | 2.243 | 1.078 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | | 2.086 | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOI WTD 3 | 4.292 | 1.519 | 1.285 | 1.147 | 1.069 | 1.076 | 1.064 | 1.046 | 1.064 | 1.011 | 1.172 | 1.025 | 1.027 | 1.056 | 1.053 | 1.035 | 1.025 | 1.019 | 1.013 | 1.019 | 1.02 | 1.023 | 1.000 | NA | | | |
| VOI WTD 5 | 5.316 | 1.506 | 1.205 | 1.157 | 1.054 | 1.071 | 1.072 | 1.069 | 1.071 | 1.027 | 1.125 | 1.041 | 1.029 | 1.036 | 1.031 | 1.024 | 1.019 | 1.026 | 1.027 | 1.019 | 1.02 | 1.023 | 1.000 | NA | | | |
| VOI WTD ALL | 4.557 | 1.757 | 1.427 | 1.343 | 1.196 | 1.137 | 1.101 | 1.092 | 1.075 | 1.068 | 1.066 | 1.045 | 1.052 | 1.046 | 1.034 | 1.028 | 1.025 | 1.026 | 1.027 | 1.019 | 1.02 | 1.023 | 1.000 | NA | | | |
| ARITH 3 | 2.086 | 1.732 | 1.243 | 1.136 | 1.067 | 1.077 | 1.082 | 1.050 | 1.057 | 1.011 | 1.109 | 1.017 | 1.036 | 1.054 | 1.049 | 1.045 | 1.039 | 1.021 | 1.014 | 1.016 | 1.017 | 1.011 | 1.000 | NA | | | |
| ARITH 5 | 7.003 | 1.827 | 1.196 | 1.175 | 1.072 | 1.083 | 1.058 | 1.053 | 1.021 | 1.089 | 1.031 | 1.040 | 1.083 | 1.035 | 1.025 | 1.019 | 1.015 | 1.012 | 1.017 | 1.011 | 1.000 | | | | | | |
| ARITH 10 | 9.384 | 1.954 | 1.111 | 1.100 | 1.132 | 1.073 | 1.077 | 1.069 | 1.084 | 1.032 | 1.037 | 1.038 | 1.036 | 1.026 | 1.023 | 1.015 | 1.012 | 1.017 | 1.011 | 1.000 | | | | | | | |
| 5 YR HI LO | 5.111 | 1.540 | 1.135 | 1.138 | 1.055 | 1.077 | 1.067 | 1.050 | 1.056 | 1.023 | 1.062 | 1.026 | 1.032 | 1.041 | 1.032 | 1.029 | 1.019 | 1.019 | 1.014 | 1.013 | 1.023 | NA | NA | NA | | | |
| 7 YR HI LO | 7.086 | 1.660 | 1.125 | 1.152 | 1.101 | 1.074 | 1.054 | 1.045 | 1.061 | 1.036 | 1.057 | 1.029 | 1.039 | 1.034 | 1.026 | 1.026 | 1.019 | 1.016 | 1.014 | 1.013 | 1.023 | NA | NA | NA | | | |
| ALL YR HI LO | 7.825 | 1.901 | 1.274 | 1.204 | 1.122 | 1.091 | 1.071 | 1.067 | 1.070 | 1.037 | 1.075 | 1.031 | 1.036 | 1.037 | 1.034 | 1.024 | 1.019 | 1.016 | 1.014 | 1.013 | 1.023 | NA | NA | NA | | | |
| SELECTED | 4.292 | 1.519 | 1.135 | 1.138 | 1.055 | 1.071 | 1.064 | 1.046 | 1.071 | 1.027 | 1.084 | 1.032 | 1.036 | 1.036 | 1.031 | 1.028 | 1.025 | 1.020 | 1.027 | 1.019 | 1.016 | 1.014 | 1.012 | 1.010 | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Paid Losses

| Development in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|-----------|-----------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
| 1994 | - | - | - | - | - | - | - | - | 7,781 | 72,262 | 81,424 | 81,424 | 101,034 | 105,191 | 106,703 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | |
| 1995 | 40,315 | 835,499 | 2,728,118 | 6,568,905 | 13,373,754 | 18,845,616 | 23,820,837 | 27,664,147 | 31,626,348 | 34,871,004 | 37,747,448 | 40,455,899 | 42,534,558 | 45,765,782 | 48,568,937 | 50,658,185 | 52,285,341 | 53,882,728 | 55,011,326 | 56,923,526 | 58,124,590 | 59,473,654 | 60,816,782 | |
| 1997 | 61,400 | 1,033,729 | 2,067,553 | 3,395,770 | 4,296,773 | 4,951,705 | 5,493,833 | 5,933,845 | 5,481,196 | 5,951,517 | 6,422,594 | 6,723,059 | 6,980,566 | 7,314,218 | 7,407,710 | 7,541,900 | 7,588,559 | 7,674,454 | 7,767,216 | 7,828,234 | 8,056,789 | | | |
| 1998 | 239,795 | 3,030,700 | 6,064,454 | 12,978,370 | 9,998,140 | 10,071,013 | 10,892,252 | 13,913,110 | 11,643,792 | 12,996,224 | 13,560,090 | 13,778,059 | 14,659,055 | 14,931,949 | 15,379,771 | 15,803,019 | 16,253,933 | 16,312,590 | 16,500,587 | 16,792,391 | | | | |
| 1999 | 436,833 | 2,105,831 | 3,641,761 | 3,370,046 | 3,998,601 | 4,537,790 | 4,638,276 | 4,843,173 | 5,033,565 | 5,366,728 | 5,917,698 | 6,249,511 | 6,450,553 | 6,574,295 | 6,705,452 | 6,809,966 | 6,893,063 | 6,993,274 | 7,144,639 | 7,276,048 | | | | |
| 2000 | 1,404,622 | 3,256,938 | 4,590,454 | 5,519,248 | 6,451,995 | 7,193,747 | 7,750,786 | 8,836,291 | 9,135,094 | 9,627,642 | 10,050,268 | 10,330,492 | 10,607,308 | 10,934,896 | 11,265,746 | 11,608,205 | 11,923,692 | 12,218,748 | 12,583,946 | | | | | |
| 2001 | - | 147,472 | 476,981 | 604,628 | 813,801 | 911,192 | 1,074,243 | 1,252,277 | 1,447,406 | 1,609,378 | 1,685,756 | 1,773,480 | 1,839,082 | 1,870,679 | 1,904,981 | 1,922,858 | 2,005,524 | 2,135,512 | | | | | | |
| 2002 | 47,379 | 480,361 | 1,014,084 | 1,140,741 | 1,308,579 | 1,402,608 | 1,531,018 | 1,591,392 | 1,650,124 | 1,814,667 | 1,875,002 | 1,960,925 | 2,114,181 | 2,204,070 | 2,358,085 | 2,569,598 | 2,737,830 | | | | | | | |
| 2003 | 71,422 | 201,172 | 317,027 | 378,728 | 435,000 | 491,064 | 565,402 | 600,804 | 630,373 | 686,253 | 708,407 | 762,255 | 784,155 | 833,873 | 881,870 | 925,066 | | | | | | | | |
| 2004 | 84,160 | 401,722 | 532,740 | 728,973 | 887,261 | 1,008,297 | 1,120,106 | 1,186,075 | 1,229,393 | 1,286,274 | 1,327,154 | 1,384,142 | 1,404,444 | 1,456,535 | 1,508,295 | | | | | | | | | |
| 2005 | 115,085 | 394,303 | 570,217 | 906,812 | 1,053,062 | 1,275,950 | 1,444,651 | 1,497,871 | 1,556,500 | 1,704,631 | 1,773,966 | 2,236,223 | 2,315,908 | 2,334,050 | | | | | | | | | | |
| 2006 | 8,574 | 37,183 | 143,721 | 203,989 | 274,938 | 288,877 | 300,938 | 300,938 | 300,938 | 300,938 | 300,938 | 300,938 | 300,938 | 300,938 | | | | | | | | | | |
| 2007 | 2,861 | 119,076 | 363,029 | 442,068 | 537,077 | 674,872 | 743,159 | 803,483 | 916,913 | 1,006,421 | 1,008,109 | 1,076,420 | | | | | | | | | | | | |
| 2008 | 60,614 | 254,231 | 266,381 | 320,759 | 400,143 | 502,530 | 517,750 | 562,296 | 587,385 | 596,073 | 615,335 | | | | | | | | | | | | | |
| 2009 | 93,362 | 282,127 | 442,836 | 504,349 | 532,197 | 540,101 | 592,613 | 612,576 | 623,399 | 659,857 | | | | | | | | | | | | | | |
| 2010 | - | 130,206 | 204,223 | 301,115 | 378,531 | 446,308 | 485,492 | | | | | | | | | | | | | | | | | |
| 2011 | 120,046 | 332,076 | 642,202 | 684,075 | 752,341 | 811,135 | 874,773 | 904,905 | | | | | | | | | | | | | | | | |
| 2012 | 9,099 | 133,785 | 188,389 | 213,486 | 235,093 | 249,801 | 271,398 | | | | | | | | | | | | | | | | | |
| 2013 | 43,387 | 221,753 | 340,269 | 510,062 | 602,181 | 636,244 | | | | | | | | | | | | | | | | | | |
| 2014 | 18,035 | 250,466 | 420,375 | 484,944 | 548,829 | | | | | | | | | | | | | | | | | | | |
| 2015 | - | 37,773 | 84,716 | 91,292 | | | | | | | | | | | | | | | | | | | | |
| 2016 | - | 275,228 | 350,684 | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 141,856 | 295,863 | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 73,595 | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Summary of Incurred Development Method

| RY | (1) INC LDN ULTIMATE | (2) PAID LOSS | (3) INCURRED LOSS | (4) CASE RESERVE | (5) IBNR RESERVE | (6) UNPAID RESERVE | (7) LOSS |
|--------------|----------------------------|---------------------|-------------------------|------------------------|------------------------|--------------------------|-------------|
| | | | | | | | |
| 1994 | - | - | - | - | - | - | - |
| 1995 | 114,027 | 114,027 | - | - | - | - | - |
| 1996 | 67,040 | 60,407 | 6,632 | 6,767,000 | 6,330,317 | 671,471 | 7,001,788 |
| 1997 | 8,710,315 | 8,050,798 | 8,682,253 | 985,464 | 48,082 | 833,526 | |
| 1998 | 19,151,891 | 16,792,391 | 18,971,591 | 2,179,191 | 180,220 | 2,359,410 | |
| 1999 | 8,126,510 | 7,276,048 | 8,039,539 | 763,491 | 86,971 | 850,463 | |
| 2000 | 15,194,201 | 12,582,946 | 14,987,967 | 2,404,021 | 206,236 | 2,610,258 | |
| 2001 | 3,485,098 | 2,135,112 | 3,425,000 | 1,289,889 | 60,098 | 1,349,986 | |
| 2002 | 3,490,517 | 2,737,830 | 3,340,765 | 602,935 | 149,753 | 752,687 | |
| 2003 | 1,163,566 | 925,066 | 1,107,025 | 181,959 | 56,540 | 238,500 | |
| 2004 | 2,167,660 | 1,508,295 | 2,037,947 | 529,652 | 129,713 | 659,365 | |
| 2005 | 3,037,513 | 2,334,050 | 2,778,623 | 444,573 | 258,890 | 703,463 | |
| 2006 | 592,007 | 300,938 | 533,938 | 233,000 | 58,069 | 291,069 | |
| 2007 | 1,472,234 | 1,076,420 | 1,302,593 | 226,173 | 169,641 | 395,814 | |
| 2008 | 725,301 | 615,335 | 634,174 | 18,839 | 91,131 | 109,971 | |
| 2009 | 867,437 | 687,797 | 774,453 | 114,485 | 117,474 | 222,559 | |
| 2010 | 1,024,476 | 483,492 | 986,899 | 401,217 | 137,667 | 538,985 | |
| 2011 | 2,088,904 | 904,905 | 1,773,194 | 868,290 | 315,710 | 1,184,000 | |
| 2012 | 430,973 | 271,398 | 360,480 | 89,082 | 70,494 | 150,575 | |
| 2013 | 1,280,640 | 636,244 | 1,061,991 | 425,747 | 218,648 | 644,396 | |
| 2014 | 938,415 | 548,829 | 731,229 | 182,400 | 207,186 | 389,586 | |
| 2015 | 302,923 | 91,292 | 222,633 | 131,341 | 80,290 | 211,631 | |
| 2016 | 1,214,312 | 350,684 | 868,811 | 518,127 | 345,501 | 863,628 | |
| 2017 | 991,888 | 295,863 | 662,913 | 367,050 | 328,968 | 696,018 | |
| 2018 | 1,193,420 | 73,595 | 582,223 | 508,627 | 611,198 | 1,119,825 | |
| TOTAL | 145,600,888 | 121,591,186 | 141,007,156 | 19,415,970 | 4,593,732 | 24,009,702 | |

Development Period in Months

| RY | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | 300 - ULT | | |
|------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 |
| 1995 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,321 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 1996 | 0.902 | 1,033 | 0.991 | 1,067 | 1,057 | 1,024 | 1,022 | 0.986 | 0.975 | 1,004 | 0.996 | 1,019 | 1,016 | 1,030 | 1,013 | 1,015 | 1,034 | 1,021 | 1,013 | 1,003 | 1,004 | 1,011 | 1,010 | 1,000 | 1,000 | 1,000 | |
| 1997 | 1,419 | 1,111 | 1,165 | 1,037 | 1,038 | 1,065 | 1,064 | 0.954 | 0.965 | 1,000 | 0.987 | 1,000 | 1,012 | 1,040 | 1,008 | 1,002 | 1,017 | 1,000 | 1,012 | 1,002 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 1998 | 1,204 | 1,388 | 1,084 | 1,058 | 1,045 | 0.966 | 1,000 | 1,036 | 1,012 | 1,016 | 1,025 | 1,034 | 1,027 | 1,022 | 1,012 | 1,001 | 1,030 | 1,005 | 1,006 | 1,002 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 1999 | 1,388 | 1,027 | 0.939 | 1,053 | 0.966 | 0.914 | 0.986 | 1,021 | 1,015 | 1,032 | 1,011 | 1,048 | 1,002 | 0.997 | 0,991 | 1,000 | 1,023 | 0,977 | 1,010 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2000 | 1,144 | 1,133 | 1,038 | 0.934 | 0.926 | 1,063 | 1,053 | 1,053 | 1,020 | 0.993 | 0,996 | 1,031 | 1,010 | 1,012 | 1,023 | 1,018 | 1,007 | 1,029 | 1,010 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2001 | 0.886 | 1,044 | 0.843 | 0.979 | 0.874 | 1,083 | 1,023 | 1,046 | 0,957 | 1,025 | 1,000 | 0.983 | 0,983 | 1,017 | 1,019 | 1,002 | 1,030 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2002 | 1,056 | 0.963 | 0.912 | 0.932 | 1,005 | 1,041 | 0,957 | 1,018 | 1,185 | 1,082 | 0,991 | 0,983 | 1,010 | 1,074 | 1,000 | 0,999 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2003 | 0.768 | 1,061 | 0.829 | 0,946 | 0.999 | 1,044 | 0,979 | 1,036 | 1,062 | 1,015 | 1,033 | 0,999 | 1,018 | 0,960 | 1,011 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2004 | 0.792 | 0.965 | 1,015 | 1,055 | 0,994 | 0.990 | 0,960 | 1,022 | 0,990 | 0,965 | 1,018 | 0,990 | 1,034 | 1,125 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2005 | 0.933 | 0,960 | 1,098 | 0,982 | 1,011 | 0,876 | 1,016 | 1,012 | 1,006 | 0,990 | 1,012 | 0,993 | 1,000 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,000 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2006 | 0.767 | 0,851 | 0,950 | 1,035 | 0,886 | 0.992 | 1,000 | 1,000 | 1,000 | 1,000 | 1,089 | 1,332 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2007 | 0.911 | 1,068 | 1,001 | 0,914 | 1,102 | 1,090 | 1,075 | 1,047 | 0,964 | 1,000 | 1,030 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2008 | 0.755 | 0,932 | 0,985 | 1,262 | 1,008 | 1,025 | 0,999 | 1,000 | 0,961 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2009 | 1,125 | 0,974 | 0,970 | 0,998 | 1,031 | 1,010 | 0,995 | 1,000 | 1,075 | 1,023 | 1,000 | 1,010 | 1,010 | 1,012 | 1,006 | 1,001 | 1,006 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2010 | 0.586 | 0,959 | 0,912 | 1,011 | 0,981 | 1,000 | 0,981 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | |
| 2011 | 1,126 | 1,158 | 0,990 | 1,312 | 1,043 | 1,000 | 1,000 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,006 | 1,012 | 1,006 | 1,007 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | 1,000 | | |
| 2012 | 1,075 | 0,851 | 1,037 | 0,721 | 1,037 | 0,995 | 1,018 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2013 | 0,916 | 1,273 | 1,078 | 1,013 | 1,113 | 1,009 | 1,018 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2014 | 1,190 | 0,875 | 1,022 | 0,977 | 1,064 | 1,009 | 1,015 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2015 | 1,537 | 0,675 | 0,868 | 1,060 | 1,064 | 1,009 | 1,015 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2016 | 2,647 | 1,049 | 1,027 | 1,060 | 1,064 | 1,009 | 1,015 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2017 | 1,426 | 1,071 | 1,027 | 1,060 | 1,064 | 1,009 | 1,015 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| 2018 | 1,370 | 1,071 | 1,027 | 1,060 | 1,064 | 1,009 | 1,015 | 1,020 | 1,010 | 1,000 | 1,012 | 1,019 | 1,014 | 1,028 | 1,012 | 1,006 | 1,027 | 1,004 | 1,003 | 1,001 | 1,004 | 1,006 | 1,000 | 1,000 | 1,000 | | |
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 91,936 | 91,936 | 121,424 | 121,424 | 121,424 | 121,424 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | | |
| 1996 | 53,531,127 | 48,276,728 | 49,847,528 | 49,418,091 | 52,753,131 | 55,738,398 | 57,091,009 | 58,374,713 | 57,572,078 | 56,151,497 | 56,390,043 | 56,178,569 | 57,273,589 | 58,214,908 | 59,977,748 | 60,770,990 | 61,688,931 | 63,792,668 | 65,150,171 | 65,977,887 | 66,150,235 | 66,410,152 | 67,147,099 | 67,818,570 | 67,818,570 | 67,818,570 | |
| 1997 | 3,488,066 | 4,948,408 | 5,536,941 | 6,451,250 | 7,281,588 | 7,485,500 | 7,508,968 | 7,162,148 | 6,910,221 | 7,116,889 | 7,823,237 | 7,718,570 | 7,871,255 | 7,964,060 | 8,283,527 | 8,349,349 | 8,364,780 | 8,504,335 | 8,608,821 | 8,640,554 | 8,662,253 | 8,710,315 | 8,710,315 | 8,710,315 | | | |
| 1998 | 7,409,437 | 8,921,577 | 12,369,029 | 13,404,188 | 13,919,877 | 14,550,902 | 14,199,277 | 14,829,092 | 15,013,956 | 15,259,044 | 16,052,593 | 16,444,809 | 17,597,797 | 17,814,255 | 17,835,695 | 18,556,400 | 18,647,583 | 18,568,571 | 18,971,580 | 19,046,124 | 19,151,801 | 19,151,801 | 19,151,801 | 19,151,801 | | | |
| 1999 | 5,779,938 | 8,024,566 | 8,241,907 | 7,737,024 | 8,143,655 | 8,765,684 | 9,192,692 | 7,192,692 | 7,094,802 | 7,246,091 | 7,355,843 | 7,589,350 | 7,674,873 | 8,045,876 | 8,059,649 | 7,960,409 | 7,960,409 | 7,958,497 | 8,144,204 | 7,960,286 | 8,039,539 | 8,080,670 | 8,126,510 | 8,126,510 | 8,126,510 | | |
| 2000 | 9,177,730 | 10,878,200 | 12,000,000 | 11,763,000 | 12,474,000 | 13,100,000 | 11,763,000 | 12,474,000 | 13,100,000 | 12,474,000 | 13,100,000 | 13,725,000 | 14,300,000 | 14,875,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | 15,450,000 | | |
| 2001 | 3,217,533 | 2,855,870 | 3,670,598 | 2,584,840 | 2,214,767 | 2,343,844 | 2,644,331 | 2,710,539 | 2,769,659 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | 2,663,160 | | | |
| 2002 | 2,797,972 | 2,955,239 | 2,845,096 | 2,554,519 | 2,418,970 | 2,530,211 | 2,421,288 | 2,465,465 | 2,921,043 | 3,160,884 | 3,133,768 | 3,081,785 | 3,141,200 | 3,344,801 | 3,340,765 | 3,463,326 | 3,463,326 | 3,463,326 | 3,463,326 | 3,463,326 | 3,463,326 | 3,463,326 | 3,463,326 | 3,463,326 | | | |
| 2003 | 1,489,298 | 1,143,640 | 1,213,936 | 1,006,896 | 952,160 | 951,363 | 972,568 | 1,007,453 | 1,070,316 | 1,086,373 | 1,121,830 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | 1,121,235 | | | |
| 2004 | 2,301,364 | 1,823,715 | 1,760,490 | 1,785,563 | 1,884,943 | 1,873,520 | 1,854,994 | 1,780,593 | 1,820,297 | 1,811,844 | 1,739,255 | 1,752,809 | 1,811,564 | 2,037,947 | 2,062,328 | 2,147,262 | 2,130,281 | 2,138,238 | 2,144,461 | 2,147,262 | 2,167,660 | 2,167,660 | 2,167,660 | 2,167,660 | | | |
| 2005 | 3,138,114 | 2, | | | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 |
| Excluded | | | | | | | | | | | | | | | | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 3.677 | 1.000 | 1.321 | 1.000 | 1.000 | 0.939 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 1996 | 0.902 | 1.033 | 0.991 | 1.067 | 1.057 | 1.024 | 1.022 | 0.986 | 0.975 | 1.004 | 0.996 | 1.019 | 1.016 | 1.030 | 1.013 | 1.015 | 1.034 | 1.021 | 1.013 | 1.003 | 1.004 | 1.011 | | |
| 1997 | 1.041 | 1.119 | 1.054 | 1.170 | 1.028 | 1.003 | 0.954 | 1.035 | 1.010 | 1.009 | 1.007 | 1.020 | 1.012 | 1.000 | 1.008 | 1.000 | 1.017 | 1.000 | 1.012 | 0.992 | 1.014 | | | |
| 1998 | 1.194 | 1.366 | 1.084 | 1.098 | 1.095 | 0.969 | 1.004 | 1.048 | 1.012 | 1.010 | 1.052 | 1.024 | 1.027 | 1.042 | 1.012 | 1.001 | 1.040 | 1.005 | 0.996 | 1.022 | | | | |
| 1999 | 1.388 | 1.037 | 0.939 | 1.053 | 0.966 | 0.914 | 0.986 | 1.021 | 1.015 | 1.032 | 1.011 | 1.048 | 1.002 | 0.997 | 0.991 | 1.000 | 1.023 | 0.977 | 1.010 | | | | | |
| 2000 | 1.144 | 1.133 | 1.038 | 0.934 | 0.926 | 1.063 | 1.055 | 1.053 | 1.020 | 0.993 | 0.996 | 1.031 | 1.012 | 1.023 | 1.018 | 1.007 | 1.029 | | | | | | | |
| 2001 | 0.886 | 1.044 | 0.843 | 0.979 | 0.874 | 1.083 | 1.103 | 1.046 | 0.957 | 1.025 | 1.000 | 0.983 | 0.983 | 1.017 | 1.019 | 1.002 | 1.300 | | | | | | | |
| 2002 | 1.056 | 0.963 | 0.912 | 0.932 | 1.005 | 1.041 | 0.957 | 1.018 | 1.185 | 1.082 | 0.991 | 0.983 | 1.010 | 1.074 | 1.000 | 0.999 | | | | | | | | |
| 2003 | 0.768 | 1.061 | 0.829 | 0.946 | 0.999 | 1.044 | 0.979 | 1.036 | 1.062 | 1.015 | 1.033 | 0.999 | 1.018 | 0.960 | 1.011 | | | | | | | | | |
| 2004 | 0.792 | 0.965 | 1.015 | 1.055 | 0.994 | 0.990 | 0.960 | 1.022 | 0.990 | 0.965 | 1.018 | 0.990 | 1.034 | 1.125 | | | | | | | | | | |
| 2005 | 0.933 | 0.960 | 1.059 | 0.982 | 1.011 | 0.876 | 1.016 | 1.012 | 1.000 | 0.990 | 1.012 | 0.993 | 1.008 | | | | | | | | | | | |
| 2006 | 0.767 | 0.851 | 0.950 | 1.035 | 0.886 | 0.992 | 1.000 | 1.000 | 1.000 | 1.000 | 0.889 | 1.332 | | | | | | | | | | | | |
| 2007 | 0.911 | 1.068 | 1.001 | 0.914 | 1.102 | 1.090 | 1.075 | 1.047 | 0.964 | 1.000 | 1.030 | | | | | | | | | | | | | |
| 2008 | 0.755 | 0.932 | 0.985 | 1.262 | 1.008 | 1.025 | 0.999 | 1.000 | 0.961 | 1.000 | | | | | | | | | | | | | | |
| 2009 | 1.125 | 0.974 | 0.970 | 0.998 | 1.031 | 1.010 | 0.995 | 1.000 | 0.975 | | | | | | | | | | | | | | | |
| 2010 | 0.950 | 0.950 | 0.971 | 0.981 | 1.000 | 0.974 | 1.023 | | | | | | | | | | | | | | | | | |
| 2011 | 1.156 | 1.158 | 0.990 | 1.312 | 1.043 | 1.000 | 1.005 | | | | | | | | | | | | | | | | | |
| 2012 | 1.075 | 0.851 | 1.037 | 0.721 | 1.037 | 0.995 | | | | | | | | | | | | | | | | | | |
| 2013 | 0.916 | 1.273 | 1.078 | 1.013 | 1.113 | | | | | | | | | | | | | | | | | | | |
| 2014 | 1.190 | 0.875 | 1.022 | 0.977 | | | | | | | | | | | | | | | | | | | | |
| 2015 | 1.537 | 0.675 | 0.868 | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 2.647 | 1.049 | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 1.426 | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 1.826 | 0.909 | 1.027 | 0.935 | 1.064 | 0.999 | 0.995 | 1.009 | 0.966 | 1.000 | 1.005 | 1.019 | 1.018 | 1.068 | 1.009 | 1.013 | 1.043 | 1.008 | 1.003 | 1.005 | 1.005 | 1.011 | 1.000 | NA |
| VOL WTD 5 | 1.370 | 0.975 | 1.015 | 1.060 | 1.043 | 1.005 | 1.013 | 1.020 | 0.987 | 0.987 | 1.012 | 1.005 | 1.000 | 1.028 | 1.011 | 1.008 | 1.038 | 1.015 | 1.009 | 1.005 | 1.005 | 1.011 | 1.000 | NA |
| VOL WTD ALL | 1.000 | 1.071 | 1.007 | 1.040 | 1.023 | 1.009 | 1.015 | 1.007 | 0.997 | 1.014 | 1.005 | 1.021 | 1.014 | 1.030 | 1.012 | 1.010 | 1.036 | 1.015 | 1.008 | 1.005 | 1.005 | 1.010 | 1.000 | NA |
| ARITH 3 | 1.870 | 0.866 | 0.989 | 0.904 | 1.064 | 0.998 | 0.991 | 1.008 | 0.966 | 1.000 | 0.977 | 1.105 | 1.020 | 1.053 | 1.010 | 1.006 | 1.110 | 1.004 | 1.006 | 1.005 | 1.006 | 1.006 | 1.000 | NA |
| ARITH 5 | 1.545 | 0.945 | 0.995 | 1.025 | 1.004 | 1.000 | 1.041 | 0.981 | 0.991 | 1.050 | 1.004 | 1.038 | 1.009 | 1.009 | 1.007 | 1.007 | 1.006 | 1.006 | 1.006 | 1.006 | 1.006 | 1.006 | 1.000 | |
| ARITH ALL | 1.116 | 1.016 | 0.987 | 1.017 | 1.005 | 1.007 | 1.005 | 1.185 | 1.010 | 1.039 | 1.001 | 1.035 | 1.008 | 1.030 | 1.002 | 1.005 | 1.060 | 1.005 | 1.006 | 1.004 | 1.006 | 1.006 | 1.000 | |
| 5 YR HI LO | 1.384 | 0.925 | 1.016 | 0.997 | 1.037 | 1.003 | 1.000 | 1.008 | 0.980 | 0.997 | 1.020 | 0.994 | 1.012 | 1.034 | 1.010 | 1.001 | 1.027 | 1.009 | 1.007 | 1.001 | 1.004 | NA | NA | NA |
| 7 YR HI LO | 1.271 | 0.977 | 0.986 | 1.050 | 1.044 | 1.006 | 1.003 | 1.012 | 0.987 | 1.001 | 1.010 | 0.999 | 1.009 | 1.028 | 1.010 | 1.004 | 1.024 | 1.007 | 1.007 | 1.001 | 1.004 | NA | NA | NA |
| ALL YR HI LO | 1.063 | 1.014 | 0.986 | 1.018 | 1.007 | 1.010 | 1.002 | 1.022 | 1.001 | 1.021 | 1.007 | 1.011 | 1.011 | 1.026 | 1.008 | 1.003 | 1.024 | 1.007 | 1.007 | 1.001 | 1.004 | NA | NA | NA |
| SELECTED | 1.370 | 1.071 | 1.027 | 1.060 | 1.064 | 1.009 | 1.015 | 1.020 | 1.010 | 1.000 | 1.012 | 1.019 | 1.014 | 1.028 | 1.012 | 1.006 | 1.027 | 1.004 | 1.003 | 1.001 | 1.004 | 1.006 | 1.000 | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Incurred Losses

| | Development in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----|--|
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | |
| 1994 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1995 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 25,000 | 91,936 | 121,424 | 121,424 | 121,424 | 121,424 | 121,424 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | 114,027 | | |
| 1996 | 53,331,127 | 48,276,728 | 49,847,528 | 49,418,091 | 52,753,131 | 55,738,398 | 57,091,009 | 58,374,713 | 57,572,078 | 56,151,497 | 56,390,043 | 56,178,169 | 57,273,580 | 58,214,908 | 59,977,748 | 60,770,990 | 61,688,931 | 63,792,668 | 65,150,171 | 65,977,887 | 66,150,235 | 66,410,152 | 67,147,099 | | |
| 1997 | 3,488,065 | 4,948,496 | 5,533,29 | 6,041,250 | 7,307,577 | 7,450,500 | 7,591,000 | 7,162,166 | 6,981,717 | 7,823,247 | 7,735,570 | 7,871,250 | 7,900,000 | 8,283,537 | 8,340,449 | 8,364,781 | 8,500,000 | 8,506,854 | 8,608,821 | 8,540,554 | 8,662,253 | | | | |
| 1998 | 7,409,437 | 8,294,577 | 12,459,907 | 13,404,368 | 13,919,577 | 14,550,000 | 14,924,048 | 14,704,777 | 14,821,092 | 15,913,956 | 17,004,944 | 16,023,038 | 16,500,000 | 18,896,144 | 19,031,297 | 17,942,420 | 17,739,005 | 18,356,000 | 18,647,583 | 18,566,571 | 18,971,581 | | | | |
| 1999 | 5,779,938 | 8,024,566 | 8,241,907 | 7,737,034 | 8,143,655 | 7,865,684 | 7,192,692 | 7,054,602 | 7,245,691 | 7,355,843 | 7,589,150 | 7,674,873 | 8,045,876 | 8,059,649 | 8,032,100 | 7,950,409 | 7,958,497 | 8,144,204 | 7,960,286 | 8,039,539 | | | | | |
| 2000 | 9,506,720 | 10,878,161 | 12,377,020 | 12,796,309 | 11,952,953 | 11,069,344 | 11,764,305 | 12,407,735 | 13,064,765 | 13,223,241 | 13,236,077 | 13,183,944 | 13,594,880 | 13,725,657 | 13,800,845 | 14,205,532 | 14,461,978 | 14,567,342 | 14,987,567 | | | | | | |
| 2001 | 3,217,182 | 2,938,870 | 3,070,598 | 2,580,610 | 2,534,088 | 2,214,767 | 2,397,889 | 2,643,844 | 2,764,441 | 2,644,331 | 2,710,539 | 2,709,650 | 2,662,160 | 2,536,752 | 2,580,388 | 2,626,369 | 2,625,271 | 3,425,000 | | | | | | | |
| 2002 | 2,797,972 | 2,955,239 | 2,845,096 | 2,594,519 | 2,418,970 | 2,430,893 | 2,530,221 | 2,421,288 | 2,465,465 | 2,921,043 | 3,160,884 | 3,133,768 | 3,081,785 | 3,114,120 | 3,344,801 | 3,344,801 | 3,340,765 | | | | | | | | |
| 2003 | 1,489,298 | 1,143,640 | 1,213,936 | 1,006,894 | 952,160 | 951,366 | 993,623 | 972,568 | 1,007,453 | 1,070,316 | 1,086,373 | 1,121,830 | 1,121,173 | 1,141,225 | 1,095,113 | 1,107,025 | | | | | | | | | |
| 2004 | 2,301,364 | 1,823,715 | 1,760,490 | 1,786,563 | 1,884,943 | 1,873,520 | 1,854,994 | 1,780,593 | 1,820,297 | 1,801,844 | 1,739,255 | 1,770,350 | 1,752,809 | 1,811,564 | 2,037,947 | | | | | | | | | | |
| 2005 | 3,138,114 | 2,929,139 | 2,810,581 | 3,086,814 | 3,030,308 | 3,062,220 | 2,681,318 | 2,723,317 | 2,755,742 | 2,771,583 | 2,744,820 | 2,777,459 | 2,757,862 | 2,778,623 | | | | | | | | | | | |
| 2006 | 800,017 | 613,381 | 522,074 | 495,901 | 513,397 | 454,750 | 450,939 | 450,939 | 450,939 | 450,939 | 450,939 | 450,939 | 400,939 | 533,938 | | | | | | | | | | | |
| 2007 | 1,090,014 | 993,082 | 1,060,685 | 1,062,066 | 970,948 | 1,070,209 | 1,166,127 | 1,253,301 | 1,312,571 | 1,264,959 | 1,264,959 | 1,302,593 | | | | | | | | | | | | | |
| 2008 | 731,009 | 551,962 | 514,640 | 506,914 | 539,744 | 644,925 | 660,908 | 660,233 | 660,233 | 634,174 | 634,174 | | | | | | | | | | | | | | |
| 2009 | 722,859 | 813,160 | 792,224 | 768,524 | 767,285 | 790,728 | 798,504 | 794,123 | 794,123 | 774,343 | | | | | | | | | | | | | | | |
| 2010 | 1,507,015 | 1,087,958 | 967,000 | 895,000 | 889,000 | 889,000 | 886,612 | 886,809 | | | | | | | | | | | | | | | | | |
| 2011 | 999,032 | 1,125,045 | 1,102,535 | 1,288,969 | 1,691,617 | 1,763,581 | 1,773,194 | | | | | | | | | | | | | | | | | | |
| 2012 | 510,805 | 549,280 | 467,534 | 484,868 | 349,610 | 362,382 | 360,480 | | | | | | | | | | | | | | | | | | |
| 2013 | 749,010 | 686,060 | 873,521 | 942,049 | 954,324 | 1,061,391 | | | | | | | | | | | | | | | | | | | |
| 2014 | 704,012 | 837,531 | 732,853 | 748,791 | 731,229 | | | | | | | | | | | | | | | | | | | | |
| 2015 | 247,006 | 379,643 | 256,400 | 222,633 | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 313,008 | 828,611 | 868,811 | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 465,000 | 662,913 | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 582,223 | | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial UST
 Determination of Pure Premium

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) SELECTED <u>ULTIMATE</u> | (5) POTENTIAL <u>SITES</u> | (6) PURE <u>Premium</u> |
|--------------|------------------------------------|-----------------------------------|------------------------------------|----------------------------------|-------------------------------|
| 2008 | 966,979 | 725,305 | 846,142 | 12,021 | 70 |
| 2009 | 1,064,734 | 885,617 | 975,175 | 12,003 | 81 |
| 2010 | 886,809 | 1,024,476 | 955,642 | 11,973 | 80 |
| 2011 | 1,773,194 | 2,088,904 | 1,931,049 | 11,936 | 162 |
| 2012 | 522,057 | 430,973 | 476,515 | 11,915 | 40 |
| 2013 | 1,311,204 | 1,280,640 | 1,295,922 | 11,887 | 109 |
| 2014 | 1,193,782 | 938,415 | 1,066,099 | 11,853 | 90 |
| 2015 | 225,947 | 302,923 | 264,435 | 11,834 | 22 |
| 2016 | 985,060 | 1,214,312 | 1,099,686 | 11,810 | 93 |
| 2017 | 1,262,204 | 991,881 | 1,127,042 | 11,791 | 96 |
| 2018 | 1,347,600 | 1,193,420 | 1,270,510 | 11,777 | 108 |
| TOTAL | 11,539,571 | 11,076,866 | 11,308,218 | 130,800 | 86 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 UST Remedial Claims
 Paid Bornhuetter-Ferguson Method

| (1) RY | (2) POTENTIAL SITES | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT | (8) EXPECTED UNPAID | (9) PAID LOSSES | (10) INDICATED ULTIMATE | (11) INCURRED LOSSES | (12) IBNR RESERVE | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|---------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|----------------|---------------------------|-----------------------|-------------------------------|----------------------------|-------------------------|-------------------------|-------------------------------|
| 2008 | 12,021 | 70 | 70 | 93 | 1,116,523 | 36.4% | 406,026 | 615,335 | 1,021,361 | 634,174 | 387,187 | 18,839 | 85 |
| 2009 | 12,003 | 81 | 81 | 93 | 1,114,851 | 38.0% | 423,934 | 659,857 | 1,083,792 | 774,343 | 309,449 | 114,485 | 90 |
| 2010 | 11,973 | 80 | 80 | 93 | 1,112,065 | 42.1% | 468,539 | 485,492 | 954,030 | 886,809 | 67,221 | 401,317 | 80 |
| 2011 | 11,936 | 162 | 162 | 93 | 1,108,628 | 44.7% | 495,492 | 904,905 | 1,400,397 | 1,773,194 | (372,798) | 868,290 | 117 |
| 2012 | 11,915 | 40 | 40 | 93 | 1,106,678 | 48.0% | 531,357 | 271,398 | 802,755 | 360,480 | 442,276 | 89,082 | 67 |
| 2013 | 11,887 | 109 | 109 | 93 | 1,104,077 | 51.5% | 568,338 | 636,244 | 1,204,583 | 1,061,991 | 142,591 | 425,747 | 101 |
| 2014 | 11,853 | 90 | 90 | 93 | 1,100,919 | 54.0% | 594,783 | 548,829 | 1,143,612 | 731,229 | 412,383 | 182,400 | 96 |
| 2015 | 11,834 | 22 | 22 | 93 | 1,099,154 | 59.6% | 655,050 | 91,292 | 746,342 | 222,633 | 523,709 | 131,341 | 63 |
| 2016 | 11,810 | 93 | 93 | 93 | 1,096,925 | 64.4% | 706,417 | 350,684 | 1,057,101 | 868,811 | 188,290 | 518,127 | 90 |
| 2017 | 11,791 | 96 | 96 | 93 | 1,095,160 | 76.6% | 838,452 | 295,863 | 1,134,316 | 662,913 | 471,403 | 367,050 | 96 |
| 2018 | 11,777 | 108 | 108 | 93 | 1,093,860 | 94.5% | 1,034,122 | 73,595 | 1,107,717 | 582,223 | 525,495 | 508,627 | 94 |
| TOTAL | 130,800 | | | | 12,148,841 | | 6,722,511 | 4,933,494 | 11,656,005 | 8,558,798 | 3,097,207 | 3,625,304 | 89 |

Pure Premium Selection Trend = 1.000
 3-Year Average x Latest 70
 5-Year Average x Latest 82
 All Year Average x Latest 84
 Selected Pure Premium 93 Average of 2014, 2016, 2017

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 UST Remedial Claims
 Incurred Bornhuetter-Ferguson Method

| (1) RY | (2) POTENTIAL SITES | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT | (8) EXPECTED IBNR | (9) INCURRED LOSSES | (10) INDICATED ULTIMATE | (11) PAID LOSSES | (12) UNPAID LOSS | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|---------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|----------------|-------------------------|---------------------------|-------------------------------|------------------------|------------------------|-------------------------|-------------------------------|
| 2008 | 12,021 | 70 | 70 | 93 | 1,116,523 | 12.6% | 140,286 | 634,174 | 774,460 | 615,335 | 159,125 | 18,839 | 64 |
| 2009 | 12,003 | 81 | 81 | 93 | 1,114,851 | 12.6% | 140,076 | 774,343 | 914,419 | 659,857 | 254,562 | 114,485 | 76 |
| 2010 | 11,973 | 80 | 80 | 93 | 1,112,065 | 13.4% | 149,437 | 886,809 | 1,036,246 | 485,492 | 550,755 | 401,317 | 87 |
| 2011 | 11,936 | 162 | 162 | 93 | 1,108,628 | 15.1% | 167,554 | 1,773,194 | 1,940,749 | 904,905 | 1,035,844 | 868,290 | 163 |
| 2012 | 11,915 | 40 | 40 | 93 | 1,106,678 | 16.4% | 181,018 | 360,480 | 541,498 | 271,398 | 270,100 | 89,082 | 45 |
| 2013 | 11,887 | 109 | 109 | 93 | 1,104,077 | 17.1% | 188,503 | 1,061,991 | 1,250,494 | 636,244 | 614,250 | 425,747 | 105 |
| 2014 | 11,853 | 90 | 90 | 93 | 1,100,919 | 22.1% | 243,064 | 731,229 | 974,293 | 548,829 | 425,464 | 182,400 | 82 |
| 2015 | 11,834 | 22 | 22 | 93 | 1,099,154 | 26.5% | 291,333 | 222,633 | 513,965 | 91,292 | 422,673 | 131,341 | 43 |
| 2016 | 11,810 | 93 | 93 | 93 | 1,096,925 | 28.5% | 312,102 | 868,811 | 1,180,912 | 350,684 | 830,228 | 518,127 | 100 |
| 2017 | 11,791 | 96 | 96 | 93 | 1,095,160 | 33.2% | 363,222 | 662,913 | 1,026,135 | 295,863 | 730,271 | 367,050 | 87 |
| 2018 | 11,777 | 108 | 108 | 93 | 1,093,860 | 51.2% | 560,209 | 582,223 | 1,142,432 | 73,595 | 1,068,836 | 508,627 | 97 |
| TOTAL | 130,800 | | | | 12,148,841 | | 2,736,805 | 8,558,798 | 11,295,603 | 4,933,494 | 6,362,109 | 3,625,304 | 86 |

Pure Premium Selection Trend = 1.000
 3-Year Average x Latest 70
 5-Year Average x Latest 82
 All Year Average x Latest 84
 Selected Pure Premium 93

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Summary of Paid Development Method

| RY | (1) PAID ULTIMATE | (2) PAID LDM | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|--------------|-------------------------|--------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| | | | | | | | |
| 1994 | - | - | - | - | - | - | - |
| 1995 | - | - | - | - | - | - | - |
| 1996 | - | - | - | - | - | - | - |
| 1997 | - | - | - | - | - | - | - |
| 1998 | 478,042 | 478,042 | 478,042 | - | - | - | - |
| 1999 | 2,690,066 | 2,532,094 | 2,689,320 | 157,136 | 836 | 157,972 | - |
| 2000 | 1,195,793 | 1,195,793 | 1,195,793 | - | - | - | - |
| 2001 | 6,664,686 | 5,757,861 | 6,664,686 | 906,825 | - | 906,825 | - |
| 2002 | 2,382,845 | 1,692,921 | 2,382,845 | 689,924 | - | 689,924 | - |
| 2003 | 1,543,256 | 1,276,743 | 1,543,256 | 266,513 | - | 266,513 | - |
| 2004 | 3,064,971 | 2,645,562 | 2,845,405 | 199,843 | 219,566 | 419,409 | - |
| 2005 | 2,175,022 | 1,616,331 | 2,175,022 | 558,691 | - | 558,691 | - |
| 2006 | 2,166,914 | 1,755,125 | 2,138,100 | 382,976 | 28,814 | 411,790 | - |
| 2007 | 1,473,322 | 1,150,527 | 1,194,026 | 43,499 | 279,296 | 322,795 | - |
| 2008 | 752,679 | 554,141 | 580,153 | 26,011 | 172,526 | 198,538 | - |
| 2009 | 1,082,577 | 758,059 | 982,683 | 224,624 | 99,894 | 324,518 | - |
| 2010 | 725,760 | 466,760 | 725,760 | 259,000 | - | 259,000 | - |
| 2011 | 1,328,055 | 815,994 | 935,802 | 119,800 | 392,253 | 512,062 | - |
| 2012 | 3,201,767 | 1,849,816 | 2,451,291 | 601,475 | 750,476 | 1,351,951 | - |
| 2013 | 1,679,661 | 909,739 | 1,158,669 | 248,930 | 520,992 | 769,922 | - |
| 2014 | 817,642 | 74,003 | 817,642 | 743,639 | - | 743,639 | - |
| 2015 | 825,614 | 359,484 | 723,985 | 364,501 | 101,629 | 466,130 | - |
| 2016 | 2,057,290 | 727,719 | 1,407,791 | 680,072 | 649,498 | 1,329,570 | - |
| 2017 | 3,004,613 | 771,285 | 3,004,613 | 2,233,328 | - | 2,233,328 | - |
| 2018 | 1,743,650 | 153,788 | 1,743,650 | 1,589,862 | - | 1,589,862 | - |
| TOTAL | 41,054,224 | 27,541,785 | 37,838,443 | 10,296,657 | 3,215,781 | 13,512,438 | |

Missouri Petroleum Storage Tank Insurance Fund
Reserve Study as of June 30, 2018
Insurance AST
Selection of Loss Development Factors

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Paid Losses

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | |
| 1994 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1995 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1996 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1997 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1998 | - | 16,713 | 16,713 | 16,713 | 16,713 | 16,713 | 16,713 | 16,713 | 16,713 | 78,028 | 174,102 | 358,349 | 411,237 | 438,258 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | | |
| 1999 | 34,176 | 543,408 | 676,196 | 1,567,972 | 1,601,529 | 1,609,182 | 1,625,584 | 1,692,876 | 1,717,189 | 1,863,780 | 2,008,295 | 2,125,717 | 2,204,155 | 2,214,424 | 2,250,369 | 2,529,597 | 2,529,597 | 2,532,094 | 2,532,094 | 2,532,094 | 2,532,094 | 2,532,094 | 2,532,094 | 2,532,094 | 2,532,094 |
| 2000 | 370,129 | 651,957 | 822,756 | 850,390 | 862,198 | 877,375 | 971,906 | 999,462 | 1,037,135 | 1,123,070 | 1,139,298 | 1,154,165 | 1,182,661 | 1,184,428 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | 1,195,793 | |
| 2001 | 1,334,769 | 2,056,418 | 2,236,336 | 2,404,395 | 2,628,060 | 2,750,085 | 2,817,023 | 2,896,871 | 3,183,541 | 3,519,996 | 3,623,500 | 4,580,112 | 4,674,733 | 4,876,595 | 5,018,242 | 5,488,608 | 5,638,087 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 |
| 2002 | 25,391 | 271,845 | 573,933 | 704,799 | 818,350 | 881,841 | 924,693 | 1,047,264 | 1,187,136 | 1,386,044 | 1,436,815 | 1,464,223 | 1,479,159 | 1,556,347 | 5,018,242 | 5,488,608 | 5,638,087 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | 5,757,861 | |
| 2003 | 55,198 | 182,491 | 265,162 | 413,872 | 493,384 | 585,783 | 665,773 | 694,461 | 783,706 | 823,855 | 878,721 | 1,047,401 | 1,100,227 | 1,145,541 | 1,200,282 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | |
| 2004 | 154,438 | 481,188 | 709,451 | 889,323 | 1,154,237 | 1,550,136 | 1,738,876 | 1,795,147 | 1,976,584 | 2,219,493 | 2,316,258 | 2,443,349 | 2,565,442 | 2,616,804 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | 2,645,562 | |
| 2005 | 76,161 | 890,444 | 1,013,676 | 1,114,425 | 1,203,629 | 1,266,271 | 1,326,703 | 1,350,155 | 1,385,181 | 1,396,276 | 1,407,470 | 1,431,885 | 1,477,651 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 | 1,616,331 |
| 2006 | 60,491 | 272,313 | 423,641 | 682,375 | 875,535 | 1,035,779 | 1,072,081 | 1,190,682 | 1,221,925 | 1,334,084 | 1,534,980 | 1,631,669 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 | 1,755,125 |
| 2007 | 107,082 | 353,965 | 564,316 | 635,862 | 852,470 | 936,817 | 967,505 | 1,018,844 | 1,069,756 | 1,108,422 | 1,126,553 | 1,150,527 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 | 1,276,743 |
| 2008 | 76,453 | 189,175 | 241,331 | 325,929 | 380,673 | 391,046 | 417,098 | 458,918 | 516,229 | 541,900 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | 554,141 | |
| 2009 | 6,274 | 65,671 | 122,193 | 236,292 | 251,768 | 366,562 | 459,776 | 569,158 | 696,182 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | 758,059 | |
| 2010 | 25,118 | 101,329 | 119,772 | 202,531 | 218,274 | 289,061 | 327,938 | 439,479 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | 466,760 | |
| 2011 | 105,665 | 351,316 | 535,992 | 579,582 | 651,347 | 711,550 | 759,749 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 | 815,994 |
| 2012 | 492,662 | 792,235 | 1,110,684 | 1,305,178 | 1,533,202 | 1,668,186 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 | 1,849,816 |
| 2013 | 89,198 | 341,477 | 541,380 | 753,022 | 813,524 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 | 909,739 |
| 2014 | 3,119 | 3,119 | 19,091 | 61,186 | 61,186 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 | 74,003 |
| 2015 | 35,104 | 172,789 | 277,518 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 | 359,484 |
| 2016 | 145,829 | 566,906 | 566,906 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 | 727,719 |
| 2017 | 139,537 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 | 771,285 |
| 2018 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 | 153,788 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Summary of Incurred Development Method

| (1) RY | (2) INC LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|-----------|----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | - | - | - | - | - | - |
| 1995 | - | - | - | - | - | - |
| 1996 | - | - | - | - | - | - |
| 1997 | - | - | - | - | - | - |
| 1998 | 478,042 | 478,042 | 478,042 | - | - | - |
| 1999 | 2,689,230 | 2,532,094 | 2,689,230 | 157,136 | - | 157,136 |
| 2000 | 1,195,793 | 1,195,793 | 1,195,793 | - | - | - |
| 2001 | 6,667,797 | 5,757,861 | 6,664,686 | 906,825 | 3,111 | 909,936 |
| 2002 | 2,386,183 | 1,692,921 | 2,382,845 | 689,924 | 3,338 | 693,262 |
| 2003 | 1,548,303 | 1,276,743 | 1,543,256 | 266,513 | 5,047 | 271,561 |
| 2004 | 2,865,372 | 2,645,562 | 2,845,405 | 199,843 | 19,967 | 219,810 |
| 2005 | 2,206,643 | 1,616,331 | 2,175,022 | 558,691 | 31,621 | 590,312 |
| 2006 | 2,154,225 | 1,755,125 | 2,138,100 | 382,976 | 16,124 | 399,100 |
| 2007 | 1,257,175 | 1,150,527 | 1,194,026 | 43,499 | 63,149 | 106,648 |
| 2008 | 609,737 | 554,141 | 580,153 | 26,011 | 29,584 | 55,595 |
| 2009 | 1,046,180 | 758,059 | 982,683 | 224,624 | 63,497 | 288,122 |
| 2010 | 739,771 | 466,760 | 725,760 | 259,000 | 14,012 | 273,012 |
| 2011 | 1,079,586 | 815,994 | 935,802 | 119,808 | 143,784 | 263,592 |
| 2012 | 2,868,213 | 1,849,816 | 2,451,291 | 601,475 | 416,922 | 1,018,396 |
| 2013 | 1,394,147 | 909,739 | 1,158,669 | 248,930 | 235,478 | 484,409 |
| 2014 | 1,016,535 | 74,003 | 817,642 | 743,639 | 198,893 | 942,532 |
| 2015 | 931,030 | 359,484 | 723,985 | 364,501 | 207,045 | 571,546 |
| 2016 | 1,796,378 | 727,719 | 1,407,791 | 680,072 | 388,586 | 1,068,658 |
| 2017 | 3,943,594 | 771,285 | 3,004,613 | 2,233,328 | 938,982 | 3,172,310 |
| 2018 | 3,018,130 | 153,788 | 1,743,650 | 1,589,862 | 1,274,480 | 2,864,342 |
| TOTAL | 41,892,064 | 27,541,785 | 37,838,443 | 10,296,657 | 4,053,621 | 14,350,279 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Development of Losses to Ultimate

| RY | Development Period in Months | | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------------------------------|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | 300 - ULT | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | |
| 1995 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | |
| 1996 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | |
| 1998 | 0.919 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 5,060 | 1,000 | 1,000 | 1,000 | 0.941 | 0,860 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | |
| 1999 | 2.823 | 1,728 | 1,311 | 1,028 | 1,000 | 1,002 | 1,000 | 1,223 | 1,011 | 1,020 | 1,017 | 0,999 | 0,985 | 1,000 | 1,000 | 1,050 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2000 | 0.962 | 1,129 | 1,031 | 0,939 | 0,956 | 1,047 | 1,016 | 1,044 | 1,052 | 1,000 | 1,000 | 0,998 | 1,001 | 0,993 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2001 | 1,249 | 1,030 | 0,860 | 0,957 | 1,024 | 1,053 | 1,037 | 1,158 | 1,088 | 1,010 | 1,145 | 1,020 | 1,010 | 1,065 | 1,015 | 1,050 | 1,005 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2002 | 1,400 | 0,975 | 0,747 | 0,999 | 1,094 | 1,051 | 0,969 | 1,000 | 0,961 | 1,006 | 1,000 | 1,208 | 0,910 | 1,031 | 0,994 | 1,073 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2003 | 1,007 | 0,827 | 1,143 | 1,042 | 1,096 | 1,030 | 1,030 | 1,011 | 1,061 | 1,240 | 0,987 | 1,006 | 0,967 | 0,960 | 1,071 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2004 | 1,017 | 1,163 | 1,104 | 1,448 | 1,013 | 1,039 | 1,007 | 1,279 | 1,013 | 0,998 | 0,994 | 0,994 | 0,998 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2005 | 0.924 | 1,035 | 1,032 | 0,955 | 1,137 | 1,010 | 1,011 | 0,988 | 1,000 | 1,002 | 1,000 | 1,206 | 1,077 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2006 | 1,741 | 1,117 | 1,068 | 1,045 | 1,040 | 1,074 | 1,037 | 1,282 | 0,879 | 1,057 | 1,033 | 1,025 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2007 | 0.990 | 0,996 | 0,948 | 0,974 | 1,000 | 1,099 | 1,009 | 0,999 | 0,954 | 1,000 | 1,001 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2008 | 1,208 | 1,023 | 0,966 | 1,026 | 1,127 | 1,000 | 1,000 | 1,083 | 0,941 | 1,000 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2009 | 1,279 | 1,001 | 1,295 | 1,058 | 1,133 | 1,003 | 1,000 | 1,184 | 0,977 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2010 | 0,567 | 1,112 | 1,246 | 1,147 | 1,203 | 1,000 | 1,032 | 1,197 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2011 | 1,092 | 1,390 | 0,942 | 1,096 | 1,023 | 1,038 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2012 | 1,147 | 1,409 | 0,953 | 1,053 | 1,078 | 1,054 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2013 | 1,176 | 1,007 | 1,066 | 1,037 | 0,972 | 1,028 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2014 | 6,658 | 0,941 | 1,040 | 1,000 | 1,033 | 1,028 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2015 | 1,693 | 0,991 | 1,039 | 1,034 | 1,033 | 1,028 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2016 | 1,667 | 1,154 | 0,992 | 1,034 | 1,033 | 1,028 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2017 | 2,350 | 1,029 | 0,992 | 1,034 | 1,033 | 1,028 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| 2018 | 1,319 | 1,029 | 0,992 | 1,034 | 1,033 | 1,028 | 1,014 | 1,132 | 0,957 | 1,013 | 0,998 | 1,045 | 0,993 | 1,007 | 1,004 | 1,002 | 1,001 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | |
| RY | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1996 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1998 | 127,001 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 590,611 | 590,611 | 590,611 | 590,611 | 590,611 | 555,611 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | 478,042 | |
| 1999 | 308,314 | 870,343 | 1,504,209 | 1,971,983 | 2,027,001 | 2,026,436 | 2,026,044 | 2,026,044 | 2,482,580 | 2,510,580 | 2,510,580 | 2,510,580 | 2,510,580 | 2,561,170 | 2,620,820 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 | 2,620,160 |
| 2000 | 1,026,004 | 986,880 | 1,114,568 | 1,148,569 | 1,078,568 | 1,030,940 | 1,079,607 | 1,097,363 | 1,145,515 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | | | |
| 2001 | 3,289,000 | 4,108,645 | 4,233,509 | 3,642,391 | 3,484,058 | 3,566,802 | 3,756,792 | 3,895,867 | 4,511,171 | 4,910,015 | 4,958,003 | 5,677,351 | 5,790,979 | 5,849,503 | 6,227,944 | 6,318,643 | 6,632,000 | 6,664,686 | 6,667,797 | 6,667,797 | 6,667,797 | 6,667,797 | 6,667,797 | 6,667,797 | 6,667,797 | 6,667,797 | | |
| 2002 | 1,797,008 | 2,516,405 | 2,455,720 | 1,833,500 | 1,832,500 | 2,004,966 | 2,106,298 | 2,041,647 | 2,121,770 | 2,141,671 | 2,161,513 | 2,172,533 | 2,197,533 | 2,281,937 | 2,316,740 | 2,324,838 | 2,321,133 | 2,382,845 | 2,386,183 | 2,386,183 | 2,386,183 | 2,386,183 | 2,386,183 | 2,386,183 | 2,386,183 | 2,386,183 | | |
| 2003 | 1,020,098 | 1,027,589 | 849,418 | 970,556 | 1,011,191 | 1,108,245 | 1,141,783 | 1,175,610 | 1,188,633 | 1,261,406 | 1,563,735 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | 1,542,848 | | | |
| 2004 | 1,125,017 | 1,144,232 | 1,231,067 | 1,474,545 | 1,475,649 | 1,522,726 | 1,544,148 | 1,653,994 | 1,671,234 | 1,688,486 | 1,688,486 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | 1,672,496 | | | |
| 2005 | 1,543,495 | 1,425,516 | 1,475,649 | 1,522,726 | 1,544,148 | 1,653,994 | 1,671,234 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | 1,688,486 | | | |
| 2006 | 674,273 | 1,174,072 | 1,310,933 | 1,399,553 | 1,462,786 | 1,521,109 | 1, | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|----|----|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1996 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1998 | 0.919 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 5.060 | 1.000 | 1.000 | 1.000 | 0.941 | 0.860 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 1999 | 2.823 | 1.728 | 1.311 | 1.028 | 1.000 | 1.002 | 1.000 | 1.223 | 1.011 | 1.020 | 1.017 | 0.999 | 0.985 | 1.000 | 1.000 | 1.050 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| 2000 | 0.962 | 1.129 | 1.031 | 0.939 | 0.956 | 1.047 | 1.016 | 1.044 | 1.052 | 1.000 | 1.000 | 0.998 | 1.001 | 0.993 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | |
| 2001 | 1.249 | 1.030 | 0.860 | 0.957 | 1.024 | 1.053 | 1.037 | 1.158 | 1.088 | 1.010 | 1.145 | 1.020 | 1.010 | 1.065 | 1.015 | 1.050 | 1.005 | | | | | | | | | | | |
| 2002 | 1.400 | 0.975 | 0.747 | 0.999 | 1.094 | 1.051 | 0.969 | 1.000 | 0.961 | 1.006 | 1.000 | 1.208 | 0.910 | 1.031 | 0.994 | 1.073 | | | | | | | | | | | | |
| 2003 | 1.007 | 0.827 | 1.143 | 1.042 | 1.096 | 1.030 | 1.030 | 1.011 | 1.061 | 1.240 | 0.987 | 1.006 | 0.967 | 0.960 | 1.071 | | | | | | | | | | | | | |
| 2004 | 1.017 | 1.163 | 1.104 | 1.448 | 1.013 | 1.039 | 1.007 | 1.279 | 1.013 | 0.998 | 0.994 | 0.994 | 0.998 | 0.988 | | | | | | | | | | | | | | |
| 2005 | 0.924 | 1.035 | 1.032 | 0.955 | 1.137 | 1.010 | 1.011 | 0.988 | 1.000 | 1.002 | 1.000 | 1.208 | 1.077 | | | | | | | | | | | | | | | |
| 2006 | 1.741 | 1.117 | 1.068 | 1.045 | 1.040 | 1.074 | 1.037 | 1.282 | 0.879 | 1.057 | 1.033 | 1.025 | | | | | | | | | | | | | | | | |
| 2007 | 0.990 | 0.996 | 0.948 | 0.974 | 1.000 | 1.059 | 1.009 | 0.999 | 0.954 | 1.000 | 1.001 | | | | | | | | | | | | | | | | | |
| 2008 | 1.200 | 1.023 | 0.966 | 1.026 | 1.127 | 1.000 | 1.000 | 1.083 | 0.941 | 1.000 | | | | | | | | | | | | | | | | | | |
| 2009 | 1.279 | 1.001 | 1.295 | 1.058 | 1.133 | 1.003 | 1.000 | 1.184 | 0.977 | | | | | | | | | | | | | | | | | | | |
| 2010 | 0.567 | 1.112 | 1.246 | 1.147 | 1.203 | 1.000 | 1.032 | 1.197 | | | | | | | | | | | | | | | | | | | | |
| 2011 | 1.092 | 1.390 | 0.942 | 0.989 | 1.006 | 1.023 | 1.038 | | | | | | | | | | | | | | | | | | | | | |
| 2012 | 1.147 | 1.409 | 0.953 | 1.053 | 1.078 | 1.054 | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | 1.176 | 1.007 | 1.066 | 1.037 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | 6.658 | 0.941 | 1.040 | 1.000 | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 1.693 | 0.991 | 1.039 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 1.667 | 1.154 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 2.350 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 2.032 | 1.048 | 1.051 | 1.038 | 1.033 | 1.038 | 1.022 | 1.159 | 0.959 | 1.029 | 1.014 | 1.058 | 1.015 | 0.996 | 1.018 | 1.049 | 1.003 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| VOL WTD 5 | 1.974 | 1.143 | 0.995 | 1.038 | 1.062 | 1.028 | 1.015 | 1.161 | 0.943 | 1.013 | 1.003 | 1.079 | 0.996 | 1.025 | 1.013 | 1.047 | 1.003 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| VOL WTD ALL | 1.319 | 1.095 | 0.992 | 1.034 | 1.046 | 1.040 | 1.014 | 1.132 | 1.029 | 1.025 | 1.038 | 1.045 | 0.993 | 1.016 | 1.013 | 1.047 | 1.003 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ARTH 3 | 1.903 | 1.029 | 1.049 | 1.030 | 1.019 | 1.026 | 1.023 | 1.155 | 0.957 | 1.019 | 1.011 | 1.076 | 1.014 | 0.993 | 1.026 | 1.041 | 1.002 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ARTH 5 | 2.709 | 1.100 | 1.008 | 1.045 | 1.078 | 1.016 | 1.016 | 1.149 | 0.950 | 1.011 | 1.003 | 1.088 | 0.992 | 1.007 | 1.016 | 1.034 | 1.001 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ARTH ALL | 1.593 | 1.107 | 1.044 | 1.041 | 1.055 | 1.032 | 1.013 | 1.111 | 1.333 | 1.030 | 1.018 | 1.051 | 0.986 | 0.985 | 1.013 | 1.034 | 1.001 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 5 YR HI LO | 1.903 | 1.051 | 1.011 | 1.030 | 1.072 | 1.009 | 1.014 | 1.155 | 0.957 | 1.001 | 0.998 | 1.080 | 0.992 | 1.004 | 1.005 | 1.033 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| 7 YR HI LO | 1.607 | 1.131 | 1.069 | 1.035 | 1.069 | 1.031 | 1.018 | 1.149 | 0.977 | 1.013 | 1.006 | 1.051 | 0.992 | 0.995 | 1.004 | 1.033 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| ALL YR HI LO | 1.369 | 1.087 | 1.046 | 1.021 | 1.051 | 1.030 | 1.015 | 1.107 | 1.006 | 1.010 | 1.006 | 1.037 | 0.984 | 0.995 | 1.004 | 1.033 | 1.000 | 1.000 | NA | NA | NA | NA | NA | NA | NA | NA | NA | |
| SELECTED | 1.319 | 1.029 | 0.992 | 1.034 | 1.033 | 1.028 | 1.014 | 1.132 | 0.957 | 1.013 | 0.998 | 1.045 | 0.993 | 1.007 | 1.004 | 1.002 | 1.001 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Incurred Losses

| NY | Development in Months | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 |
| 1994 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1995 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1996 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1997 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 1998 | 127,001 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | 116,714 | |
| 1999 | 308,314 | 870,343 | 1,504,209 | 1,971,983 | 2,027,001 | 2,026,436 | 2,030,044 | 2,030,044 | 2,482,580 | 2,510,580 | 2,561,027 | 2,603,820 | 2,601,196 | 2,561,795 | 2,561,795 | 2,561,795 | 2,689,230 | 2,689,230 | 2,689,230 | 2,689,230 | 2,689,230 | 2,689,230 | 2,689,230 | 2,689,230 |
| 2000 | 1,026,004 | 986,880 | 1,114,568 | 1,148,569 | 1,078,568 | 1,030,942 | 1,079,607 | 1,097,363 | 1,145,515 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | 1,205,440 | |
| 2001 | 3,289,000 | 4,108,645 | 4,233,509 | 3,642,391 | 3,484,058 | 3,566,802 | 3,756,792 | 3,895,867 | 4,511,171 | 4,910,015 | 4,958,003 | 5,677,351 | 5,790,979 | 5,849,503 | 6,227,944 | 6,318,643 | 6,632,090 | 6,664,686 | 6,664,686 | 6,664,686 | 6,664,686 | 6,664,686 | 6,664,686 | 6,664,686 |
| 2002 | 1,797,000 | 2,516,405 | 2,453,720 | 1,833,500 | 1,832,500 | 2,004,966 | 2,106,298 | 2,041,647 | 2,041,647 | 1,961,513 | 1,972,533 | 2,381,937 | 2,167,740 | 2,234,838 | 2,221,133 | 2,382,845 | 2,382,845 | 2,382,845 | 2,382,845 | 2,382,845 | 2,382,845 | 2,382,845 | 2,382,845 | 2,382,845 |
| 2003 | 1,020,098 | 1,027,589 | 849,418 | 970,556 | 1,011,191 | 1,108,245 | 1,141,783 | 1,175,610 | 1,188,633 | 1,261,401 | 1,563,735 | 1,542,848 | 1,552,847 | 1,501,010 | 1,441,010 | 1,543,256 | 1,543,256 | 1,543,256 | 1,543,256 | 1,543,256 | 1,543,256 | 1,543,256 | 1,543,256 | 1,543,256 |
| 2004 | 1,125,017 | 1,144,322 | 1,331,067 | 1,470,142 | 2,128,424 | 2,155,771 | 2,240,562 | 2,256,189 | 2,886,714 | 2,924,415 | 2,919,415 | 2,900,827 | 2,884,520 | 2,878,727 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 | 2,845,405 |
| 2005 | 1,543,485 | 1,425,516 | 1,475,649 | 1,522,726 | 1,454,148 | 1,653,994 | 1,671,234 | 1,688,897 | 1,668,486 | 1,668,486 | 1,672,486 | 1,672,486 | 1,672,486 | 1,672,486 | 1,672,486 | 2,019,809 | 2,175,022 | 2,175,022 | 2,175,022 | 2,175,022 | 2,175,022 | 2,175,022 | 2,175,022 | 2,175,022 |
| 2006 | 674,273 | 1,174,072 | 1,310,933 | 1,399,553 | 1,462,786 | 1,521,109 | 1,634,236 | 1,694,721 | 2,173,374 | 1,909,874 | 2,018,280 | 2,085,285 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 | 2,138,100 |
| 2007 | 1,238,240 | 1,225,463 | 1,220,733 | 1,156,901 | 1,127,089 | 1,127,090 | 1,238,935 | 1,250,577 | 1,249,903 | 1,192,870 | 1,192,870 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 | 1,194,026 |
| 2008 | 415,004 | 497,948 | 509,298 | 492,059 | 504,948 | 569,232 | 569,232 | 569,232 | 616,446 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | 580,293 | |
| 2009 | 426,280 | 545,273 | 545,773 | 706,544 | 747,814 | 847,182 | 849,952 | 849,952 | 1,006,233 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | 982,683 | |
| 2010 | 542,005 | 307,495 | 341,816 | 426,049 | 488,528 | 587,710 | 587,710 | 606,228 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | 725,760 | |
| 2011 | 620,289 | 677,051 | 941,165 | 886,346 | 876,176 | 881,631 | 901,895 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 | 935,802 |
| 2012 | 1,330,875 | 1,525,925 | 2,150,183 | 2,049,128 | 2,158,132 | 2,326,654 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 | 2,451,291 |
| 2013 | 910,009 | 1,070,292 | 1,077,876 | 1,149,154 | 1,192,073 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | 1,158,669 | |
| 2014 | 125,502 | 835,619 | 785,906 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | 817,642 | |
| 2015 | 415,143 | 702,914 | 696,796 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | 723,985 | |
| 2016 | 732,004 | 1,219,943 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | 1,407,791 | |
| 2017 | 1,278,375 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | 3,004,613 | |
| 2018 | 1,743,650 | | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Determination of Pure Premium

| (1) RY | (2) PAID LDM ULTIMATE | (3) INC LDM ULTIMATE | (4) SELECTED ULTIMATE | (5) POLICIES IN FORCE | (6) PURE PREMIUM |
|-----------|-----------------------------|----------------------------|-----------------------------|-----------------------------|------------------------|
| 2008 | 752,679 | 609,737 | 681,208 | 517 | 1,318 |
| 2009 | 1,082,577 | 1,046,180 | 1,064,378 | 563 | 1,891 |
| 2010 | 725,760 | 739,771 | 732,765 | 578 | 1,268 |
| 2011 | 1,328,055 | 1,079,586 | 1,203,821 | 810 | 1,486 |
| 2012 | 3,201,767 | 2,868,213 | 3,034,990 | 975 | 3,113 |
| 2013 | 1,679,661 | 1,394,147 | 1,536,904 | 1,003 | 1,532 |
| 2014 | 817,642 | 1,016,535 | 917,089 | 1,030 | 890 |
| 2015 | 825,614 | 931,030 | 878,322 | 1,021 | 860 |
| 2016 | 2,057,290 | 1,796,378 | 1,926,834 | 1,010 | 1,908 |
| 2017 | 3,004,613 | 3,943,594 | 3,474,103 | 1,005 | 3,457 |
| 2018 | 1,743,650 | 3,018,130 | 2,380,890 | 999 | 2,383 |
| TOTAL | 17,219,307 | 18,443,301 | 17,831,304 | 9,511 | 1,875 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Insurance AST
 Paid Bornhuetter-Ferguson Method

| (1) RY | (2) POLICIES IN FORCE | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT UNPAID | (8) EXPECTED UNPAID | (9) PAID LOSSES | (10) INDICATED ULTIMATE | (11) INCURRED LOSSES | (12) IBNR RESERVE | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|-----------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|--------------------------|---------------------------|-----------------------|-------------------------------|----------------------------|-------------------------|-------------------------|-------------------------------|
| 2008 | 517 | 1,318 | 1,771 | 1,618 | 836,649 | 26.4% | 220,687 | 554,141 | 774,828 | 580,153 | 194,675 | 26,011 | 1,499 |
| 2009 | 563 | 1,891 | 2,467 | 1,667 | 938,423 | 30.0% | 281,306 | 758,059 | 1,039,364 | 982,683 | 56,682 | 224,624 | 1,846 |
| 2010 | 578 | 1,268 | 1,606 | 1,717 | 992,328 | 33.8% | 335,713 | 466,760 | 802,473 | 725,760 | 76,713 | 259,000 | 1,388 |
| 2011 | 810 | 1,486 | 1,828 | 1,768 | 1,432,352 | 38.6% | 552,275 | 815,994 | 1,368,269 | 935,802 | 432,467 | 119,808 | 1,689 |
| 2012 | 975 | 3,113 | 3,717 | 1,821 | 1,775,851 | 42.2% | 749,855 | 1,849,816 | 2,599,672 | 2,451,291 | 148,381 | 601,475 | 2,666 |
| 2013 | 1,003 | 1,532 | 1,776 | 1,876 | 1,881,655 | 45.8% | 862,512 | 909,739 | 1,772,251 | 1,158,669 | 613,582 | 248,930 | 1,767 |
| 2014 | 1,030 | 890 | 1,002 | 1,932 | 1,990,277 | 51.0% | 1,014,240 | 74,003 | 1,088,243 | 817,642 | 270,601 | 743,639 | 1,057 |
| 2015 | 1,021 | 860 | 940 | 1,990 | 2,032,073 | 56.5% | 1,147,280 | 359,484 | 1,506,764 | 723,985 | 782,779 | 364,501 | 1,476 |
| 2016 | 1,010 | 1,908 | 2,024 | 2,050 | 2,070,485 | 64.6% | 1,338,098 | 727,719 | 2,065,817 | 1,407,791 | 658,026 | 680,072 | 2,045 |
| 2017 | 1,005 | 3,457 | 3,561 | 2,111 | 2,122,042 | 73.3% | 1,555,227 | 771,285 | 2,326,512 | 3,004,613 | (678,101) | 2,233,328 | 2,315 |
| 2018 | 999 | 2,383 | 2,383 | 2,175 | 2,172,654 | 90.2% | 1,958,902 | 153,788 | 2,112,690 | 1,743,650 | 369,040 | 1,589,862 | 2,115 |
| TOTAL | 9,511 | | | | 18,244,788 | | 10,016,096 | 7,440,787 | 17,456,884 | 14,532,038 | 2,924,846 | 7,091,251 | 1,835 |

Pure Premium Selection

Trend = 1.030

| | |
|---------------------------|-------|
| 3-Year Average x Latest | 2,175 |
| 5-Year Average x Latest | 1,861 |
| All Year Average x Latest | 2,069 |
| Selected Pure Premium | 2,175 |

Missouri Petroleum Storage Tank Insurance Fund
Reserve Study as of June 30, 2018
Insurance AST
Incurred Bornhuetter-Ferguson Method

| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|-------|----------------------|------------------------|----------------------|------------------------|--------------------|-----------------|------------------|--------------------|-----------------------|----------------|----------------|-----------------|-----------------------|
| RY | POLICIES IN FORCE | PROJECTED PURE PREM | TRENDED PURE PREM | DETRENDED PURE PREM | EXPECTED LOSSES | PERCENT IBNR | EXPECTED IBNR | INCURRED LOSSES | INDICATED ULTIMATE | PAID LOSSES | UNPAID LOSS | CASE RESERVE | ULTIMATE PURE PREM |
| 2008 | 517 | 1,318 | 1,771 | 1,618 | 836,649 | 4.9% | 40,593 | 580,153 | 620,746 | 554,141 | 66,605 | 26,011 | 1,201 |
| 2009 | 563 | 1,891 | 2,467 | 1,667 | 938,423 | 6.1% | 56,957 | 982,683 | 1,039,640 | 758,059 | 281,581 | 224,624 | 1,847 |
| 2010 | 578 | 1,268 | 1,606 | 1,717 | 992,328 | 1.9% | 18,795 | 725,760 | 744,555 | 466,760 | 277,795 | 259,000 | 1,288 |
| 2011 | 810 | 1,486 | 1,828 | 1,768 | 1,432,352 | 13.3% | 190,767 | 935,802 | 1,126,569 | 815,994 | 310,575 | 119,808 | 1,391 |
| 2012 | 975 | 3,113 | 3,717 | 1,821 | 1,775,851 | 14.5% | 258,137 | 2,451,291 | 2,709,427 | 1,849,816 | 859,611 | 601,475 | 2,779 |
| 2013 | 1,003 | 1,532 | 1,776 | 1,876 | 1,881,655 | 16.9% | 317,821 | 1,158,669 | 1,476,490 | 909,739 | 566,751 | 248,930 | 1,472 |
| 2014 | 1,030 | 890 | 1,002 | 1,932 | 1,990,277 | 19.6% | 389,413 | 817,642 | 1,207,055 | 74,003 | 1,133,052 | 743,639 | 1,172 |
| 2015 | 1,021 | 860 | 940 | 1,990 | 2,032,073 | 22.2% | 451,898 | 723,985 | 1,175,883 | 359,484 | 816,399 | 364,501 | 1,152 |
| 2016 | 1,010 | 1,908 | 2,024 | 2,050 | 2,070,485 | 21.6% | 447,880 | 1,407,791 | 1,855,672 | 727,719 | 1,127,952 | 680,072 | 1,837 |
| 2017 | 1,005 | 3,457 | 3,561 | 2,111 | 2,122,042 | 23.8% | 505,265 | 3,004,613 | 3,509,877 | 771,285 | 2,738,593 | 2,233,328 | 3,492 |
| 2018 | 999 | 2,383 | 2,383 | 2,175 | 2,172,654 | 42.2% | 917,457 | 1,743,650 | 2,661,107 | 153,788 | 2,507,319 | 1,589,862 | 2,664 |
| TOTAL | 9,511 | | | | 18,244,788 | | 3,594,983 | 14,532,038 | 18,127,021 | 7,440,787 | 10,686,234 | 7,091,251 | 1,906 |

Pure Premium Selection

Trend = 1.030

| | |
|---------------------------|-------|
| 3-Year Average x Latest | 2,175 |
| 5-Year Average x Latest | 1,861 |
| All Year Average x Latest | 2,069 |
| Selected Pure Premium | 2,175 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Summary of Paid Development Method

| (1) RY | (2) PAID LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|-----------|-----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | - | - | - | - | - | - |
| 1995 | 106,826 | 106,826 | 106,826 | - | - | - |
| 1996 | 109,456 | 109,456 | 109,456 | - | - | - |
| 1997 | - | - | - | - | - | - |
| 1998 | 662,586 | 635,092 | 635,093 | 1 | 27,493 | 27,494 |
| 1999 | 1,500,783 | 1,390,883 | 1,500,783 | 109,899 | - | 109,899 |
| 2000 | 5,376,624 | 3,920,130 | 5,376,624 | 1,456,494 | - | 1,456,494 |
| 2001 | 1,621,524 | 1,166,740 | 1,621,524 | 454,784 | - | 454,784 |
| 2002 | 239,493 | 239,493 | 239,493 | - | - | - |
| 2003 | 582,435 | 501,430 | 552,376 | 50,946 | 30,059 | 81,005 |
| 2004 | 2,060,194 | 1,703,105 | 1,859,341 | 156,236 | 200,853 | 357,089 |
| 2005 | 79,838 | 79,838 | 79,838 | - | - | - |
| 2006 | - | - | - | - | - | - |
| 2007 | 41,750 | 41,750 | 41,750 | - | - | - |
| 2008 | 51,787 | 51,787 | 51,787 | - | - | - |
| 2009 | 268,109 | 163,657 | 179,722 | 16,065 | 88,388 | 104,453 |
| 2010 | - | - | - | - | - | - |
| 2011 | - | - | - | - | - | - |
| 2012 | - | - | - | - | - | - |
| 2013 | - | - | - | - | - | - |
| 2014 | - | - | - | - | - | - |
| 2015 | 481,642 | 142,401 | 195,789 | 53,388 | 285,852 | 339,240 |
| 2016 | - | - | - | - | - | - |
| 2017 | 325,861 | 53,255 | 65,680 | 12,425 | 260,182 | 272,606 |
| 2018 | - | - | - | - | - | - |
| TOTAL | 13,508,906 | 10,305,842 | 12,616,079 | 2,310,237 | 892,827 | 3,203,064 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1996 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1998 | 2.879 | 1.306 | 1.090 | 1.020 | 1.000 | 1.056 | 1.070 | 1.037 | 1.019 | 1.055 | 1.046 | 1.006 | 1.009 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 1999 | 1.701 | 2.649 | 1.129 | 1.235 | 1.136 | 1.319 | 1.105 | 1.061 | 1.049 | 1.055 | 1.024 | 1.016 | 1.002 | 1.007 | 1.007 | 1.035 | 1.032 | 1.041 | | | | | | | |
| 2000 | 1.962 | 1.171 | 1.107 | 1.048 | 1.046 | 1.070 | 1.068 | 1.150 | 1.105 | 1.047 | 1.036 | 1.019 | 1.040 | 1.028 | 1.016 | 1.035 | 1.216 | 1.066 | | | | | | | |
| 2001 | | 7.454 | 2.945 | 2.045 | 1.350 | 1.237 | 1.305 | 1.137 | 1.164 | 1.109 | 1.073 | 1.141 | 1.052 | 1.205 | 1.093 | 1.118 | | | | | | | | | |
| 2002 | 4.517 | 2.551 | 1.064 | 1.086 | 1.000 | 1.038 | 1.904 | 1.113 | 1.019 | 1.000 | 1.065 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 2003 | 1.224 | 1.255 | 1.000 | 1.000 | 1.317 | 1.736 | 1.067 | 1.029 | 1.286 | 1.111 | 1.054 | 1.071 | 1.053 | 1.010 | | | | | | | | | | | |
| 2004 | | 3.475 | 1.113 | 1.759 | 1.221 | 1.157 | 1.322 | 1.092 | 1.254 | 1.712 | 1.027 | 1.055 | 1.028 | 1.066 | | | | | | | | | | | |
| 2005 | 1.794 | 1.493 | 1.622 | 1.000 | 1.316 | 1.173 | 1.202 | 1.079 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | | | | |
| 2006 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2007 | 2.517 | 1.169 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | | | | | |
| 2008 | 1.226 | 1.100 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | | | | | | |
| 2009 | | 1.105 | 1.340 | 1.052 | 1.375 | 1.089 | 1.347 | 1.098 | | | | | | | | | | | | | | | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 2.167 | 1.222 | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 1.233 | | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | 2.479 | 2.167 | 1.222 | NA | NA | 1.089 | 1.237 | 1.060 | 1.000 | 1.000 | 1.052 | 1.036 | 1.056 | 1.109 | 1.046 | 1.154 | 1.051 | 1.028 | 1.001 | 1.027 | 1.000 | 1.000 | NA | | |
| VOL WTD 5 | 2.479 | 2.167 | 1.222 | NA | 1.052 | 1.221 | 1.046 | 1.188 | 1.045 | 1.590 | 1.042 | 1.054 | 1.056 | 1.042 | 1.040 | 1.033 | 1.138 | 1.052 | 1.026 | 1.001 | 1.027 | 1.000 | 1.000 | NA | |
| VOL WTD ALL | 1.824 | 1.548 | 1.168 | 1.148 | 1.102 | 1.138 | 1.139 | 1.141 | 1.103 | 1.156 | 1.051 | 1.038 | 1.039 | 1.034 | 1.041 | 1.033 | 1.136 | 1.051 | 1.026 | 1.001 | 1.027 | 1.000 | 1.000 | NA | |
| ARITH 3 | 1.233 | 2.167 | 1.222 | NA | NA | 1.089 | 1.174 | 1.033 | 1.000 | 1.000 | 1.028 | 1.033 | 1.040 | 1.072 | 1.043 | 1.123 | 1.033 | 1.021 | 1.005 | 1.027 | 1.000 | 1.000 | NA | | |
| ARITH 5 | 1.233 | 2.167 | 1.222 | NA | 1.052 | 1.188 | 1.030 | 1.116 | 1.024 | 1.178 | 1.035 | 1.044 | 1.048 | 1.040 | 1.048 | 1.027 | 1.092 | 1.053 | 1.012 | 1.004 | 1.027 | 1.000 | 1.000 | NA | |
| ARITH ALL | 1.583 | 2.335 | 1.823 | 1.317 | 1.175 | 1.160 | 1.250 | 1.194 | 1.077 | 1.190 | 1.108 | 1.052 | 1.030 | 1.040 | 1.125 | 1.029 | 1.087 | 1.042 | 1.012 | 1.004 | 1.027 | 1.000 | 1.000 | NA | |
| 5 YR HI LO | NA | NA | NA | NA | NA | NA | NA | 1.000 | 1.000 | 1.000 | 1.014 | 1.055 | 1.033 | 1.044 | 1.011 | 1.014 | 1.076 | 1.049 | 1.004 | 1.000 | NA | NA | NA | NA | |
| 7 YR HI LO | NA | NA | NA | NA | NA | 1.000 | 1.000 | 1.044 | 1.057 | 1.032 | 1.076 | 1.034 | 1.048 | 1.031 | 1.029 | 1.008 | 1.025 | 1.076 | 1.033 | 1.004 | 1.000 | NA | NA | NA | NA |
| ALL YR HI LO | 1.576 | 2.208 | 1.342 | 1.171 | 1.097 | 1.154 | 1.185 | 1.142 | 1.068 | 1.131 | 1.075 | 1.046 | 1.020 | 1.037 | 1.063 | 1.022 | 1.076 | 1.033 | 1.004 | 1.000 | NA | NA | NA | NA | |
| SELECTED | 1.824 | 1.548 | 1.168 | 1.148 | 1.102 | 1.138 | 1.139 | 1.141 | 1.103 | 1.156 | 1.051 | 1.038 | 1.039 | 1.034 | 1.041 | 1.033 | 1.027 | 1.021 | 1.017 | 1.010 | 1.006 | 1.002 | 1.001 | 1.000 | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Paid Losses

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 |
| 1994 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1995 | - | - | - | - | - | - | - | 19,195 | 41,156 | 51,445 | 56,701 | 57,626 | 73,664 | 84,921 | 84,921 | 88,971 | 101,542 | 102,511 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 |
| 1996 | - | - | - | - | - | - | - | - | - | 14,203 | 27,940 | 42,359 | 43,615 | 43,615 | 48,148 | 77,977 | 82,406 | 91,416 | 101,779 | 102,681 | 103,782 | 109,456 | 109,456 |
| 1997 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1998 | - | 113,506 | 326,771 | 426,734 | 465,016 | 474,091 | 474,091 | 500,870 | 536,142 | 555,872 | 566,448 | 597,852 | 625,365 | 629,257 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | |
| 1999 | 91,601 | 155,804 | 412,759 | 466,204 | 575,644 | 653,770 | 862,519 | 953,244 | 1,011,272 | 1,067,094 | 1,119,362 | 1,181,084 | 1,209,850 | 1,229,249 | 1,232,121 | 1,241,346 | 1,250,602 | 1,294,320 | 1,335,943 | 1,390,883 | | | |
| 2000 | 600,543 | 1,178,120 | 1,380,065 | 1,527,820 | 1,601,730 | 1,675,915 | 1,792,516 | 1,914,991 | 2,202,232 | 2,433,794 | 2,547,274 | 2,638,146 | 2,687,862 | 2,795,225 | 2,873,605 | 2,920,207 | 3,022,541 | 3,675,996 | 3,920,130 | | | | |
| 2001 | - | - | 4,285 | 31,943 | 94,057 | 192,393 | 259,731 | 321,220 | 419,351 | 476,821 | 555,214 | 615,741 | 660,726 | 753,773 | 792,848 | 955,109 | 1,043,903 | 1,166,740 | | | | | |
| 2002 | - | 7,498 | 33,870 | 86,415 | 92,333 | 100,309 | 100,309 | 104,163 | 198,304 | 220,667 | 224,817 | 224,817 | 239,493 | 239,493 | 239,493 | 239,493 | 239,493 | 239,493 | 239,493 | | | | |
| 2003 | 75,879 | 92,879 | 116,529 | 116,529 | 116,529 | 153,490 | 266,468 | 284,207 | 292,415 | 376,033 | 417,688 | 440,376 | 471,503 | 496,493 | 501,430 | | | | | | | | |
| 2004 | - | 48,087 | 167,082 | 185,942 | 327,157 | 399,428 | 462,288 | 611,344 | 667,682 | 837,489 | 1,433,954 | 1,473,129 | 1,554,162 | 1,598,045 | 1,703,105 | | | | | | | | |
| 2005 | 9,181 | 16,467 | 24,588 | 39,884 | 39,884 | 52,485 | 61,585 | 74,021 | 79,838 | 79,838 | 79,838 | 79,838 | 79,838 | 79,838 | | | | | | | | | |
| 2006 | - | | | | | | | | | | | | | | | | | | | | | | |
| 2007 | - | 14,192 | 35,720 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | | | | | | | | | |
| 2008 | - | 38,408 | 47,087 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | | | | | | | | | |
| 2009 | - | - | 47,443 | 52,422 | 70,244 | 73,919 | 101,655 | 110,661 | 149,107 | 163,657 | | | | | | | | | | | | | |
| 2010 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | |
| 2011 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | |
| 2012 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | |
| 2013 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | |
| 2014 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | | | | | | | |
| 2015 | - | 53,789 | 116,564 | 142,401 | | | | | | | | | | | | | | | | | | | |
| 2016 | - | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 43,180 | 53,255 | | | | | | | | | | | | | | | | | | | | | |
| 2018 | - | | | | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Summary of Incurred Development Method

| (1) RY | (2) INC LDM ULTIMATE | (3) PAID LOSS | (4) INCURRED LOSS | (5) CASE RESERVE | (6) IBNR RESERVE | (7) UNPAID LOSS |
|--------------|----------------------------|---------------------|-------------------------|------------------------|------------------------|-----------------------|
| 1994 | - | - | - | - | - | - |
| 1995 | 106,826 | 106,826 | 106,826 | - | - | - |
| 1996 | 109,456 | 109,456 | 109,456 | - | - | - |
| 1997 | - | - | - | - | - | - |
| 1998 | 635,093 | 635,092 | 635,093 | 1 | - | 1 |
| 1999 | 1,500,783 | 1,390,883 | 1,500,783 | 109,899 | - | 109,899 |
| 2000 | 5,376,624 | 3,920,130 | 5,376,624 | 1,456,494 | - | 1,456,494 |
| 2001 | 1,621,524 | 1,166,740 | 1,621,524 | 454,784 | - | 454,784 |
| 2002 | 239,493 | 239,493 | 239,493 | - | - | - |
| 2003 | 552,376 | 501,430 | 552,376 | 50,946 | - | 50,946 |
| 2004 | 2,053,795 | 1,703,105 | 1,859,341 | 156,236 | 194,454 | 350,689 |
| 2005 | 90,100 | 79,838 | 79,838 | - | 10,262 | 10,262 |
| 2006 | - | - | - | - | - | - |
| 2007 | 51,726 | 41,750 | 41,750 | - | 9,976 | 9,976 |
| 2008 | 66,060 | 51,787 | 51,787 | - | 14,274 | 14,274 |
| 2009 | 258,423 | 163,657 | 179,722 | 16,065 | 78,701 | 94,766 |
| 2010 | - | - | - | - | - | - |
| 2011 | - | - | - | - | - | - |
| 2012 | - | - | - | - | - | - |
| 2013 | - | - | - | - | - | - |
| 2014 | - | - | - | - | - | - |
| 2015 | 328,150 | 142,401 | 195,789 | 53,388 | 132,361 | 185,748 |
| 2016 | - | - | - | - | - | - |
| 2017 | 128,301 | 53,255 | 65,680 | 12,425 | 62,622 | 75,046 |
| 2018 | - | - | - | - | - | - |
| TOTAL | 13,118,729 | 10,305,842 | 12,616,079 | 2,310,237 | 502,649 | 2,812,886 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Development of Losses to Ultimate

| | | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| RY | | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | 300 - ULT | | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 1995 | 1,000 | NA | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,067 | 1,000 | 1,000 | 0,805 | 1,291 | 1,096 | 0,885 | 0,994 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | | |
| 1996 | 0.231 | 1,000 | 1,000 | 2,333 | 2,000 | 1,000 | 0,286 | | 1,079 | 1,260 | 1,000 | 1,000 | 1,505 | 1,058 | 1,000 | 1,108 | 1,000 | 1,000 | 0,913 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 1998 | 1,062 | 2,451 | 1,173 | 0,998 | 1,460 | 1,000 | 0,738 | 0,814 | 0,872 | 1,015 | 1,047 | 0,920 | 1,000 | 0,988 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | |
| 1999 | 2,490 | 0,658 | 1,022 | 1,103 | 1,251 | 0,943 | 1,026 | 1,041 | 1,044 | 0,966 | 1,024 | 1,015 | 1,000 | 0,964 | 1,015 | 1,000 | 1,023 | 1,012 | 1,055 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | |
| 2000 | 1,181 | 1,060 | 1,072 | 1,020 | 0,993 | 1,022 | 1,108 | 1,020 | 1,244 | 1,054 | 0,991 | 1,172 | 0,992 | 0,996 | 1,049 | 1,007 | 1,043 | 0,983 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | |
| 2001 | 3,476 | 1,429 | 0,813 | 0,967 | 0,918 | 1,055 | 1,079 | 1,009 | 1,081 | 1,132 | 0,972 | 1,016 | 1,008 | 0,934 | 1,172 | 0,987 | 0,990 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | |
| 2002 | 3,261 | 0,902 | 0,742 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | | |
| 2003 | 1,004 | 1,185 | 1,031 | 1,000 | 1,114 | 1,298 | 1,128 | 0,958 | 1,150 | 1,051 | 1,000 | 0,832 | 1,147 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | | |
| 2004 | 0,860 | 3,207 | 0,981 | 1,000 | 0,999 | 1,000 | 1,211 | 0,977 | 1,540 | 1,142 | 1,031 | 1,043 | 1,000 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | |
| 2005 | 0,922 | 0,888 | 1,000 | 0,974 | 1,119 | 1,000 | 1,367 | 0,872 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | |
| 2006 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2007 | 0,860 | 1,000 | 0,485 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,065 | 1,031 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | | |
| 2008 | 0,577 | 1,000 | 0,898 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,030 | 1,065 | 1,031 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | |
| 2009 | 1,000 | 2,119 | 1,000 | 1,000 | 1,000 | 1,346 | 1,260 | 1,000 | 1,127 | 1,030 | 1,065 | 1,031 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2011 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2015 | NA | 1,000 | 1,000 | 1,017 | 1,079 | 1,022 | 1,040 | 1,000 | 1,127 | 1,030 | 1,065 | 1,031 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | | |
| 2016 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1,000 | | | | | | | | | |
| 2017 | 1,314 | 1,166 | 1,000 | 1,017 | 1,079 | 1,022 | 1,040 | 1,000 | 1,127 | 1,030 | 1,065 | 1,031 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | | |
| 2018 | 1,521 | 1,166 | 1,000 | 1,017 | 1,079 | 1,022 | 1,040 | 1,000 | 1,127 | 1,030 | 1,065 | 1,031 | 1,022 | 1,105 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | | | |
| RY | | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | 300 | ULT | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1 | 1 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 106,701 | 106,701 | 106,701 | 106,701 | 106,701 | 106,701 | 106,701 | 106,701 | 106,701 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | | | | | |
| 1996 | 65,000 | 15,001 | 15,001 | 35,001 | 70,001 | 70,000 | 20,000 | | 50,001 | 53,940 | 67,940 | 67,940 | 102,248 | 108,206 | 108,206 | 119,916 | 119,916 | 119,916 | 119,916 | 119,916 | 119,916 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | 109,456 | | | | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1998 | 282,000 | 299,445 | 733,820 | 861,104 | 859,104 | 1,254,635 | 1,254,635 | 925,870 | 753,994 | 657,7142 | 667,198 | 698,719 | 642,886 | 642,886 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | | | |
| 1999 | 576,051 | 1,434,131 | 943,131 | 963,453 | 1,062,740 | 1,329,280 | 1,254,083 | 1,286,407 | 1,338,653 | 1,397,656 | 1,350,524 | 1,383,455 | 1,403,917 | 1,403,917 | 1,353,516 | 1,373,691 | 1,422,494 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 | 1,500,783 |
| 2000 | 2,102,117 | 2,481,718 | 2,630,090 | 2,819,602 | 2,876,382 | 2,857,665 | 2,921,118 | 3,236,350 | 3,301,716 | 4,107,206 | 4,330,459 | 4,291,056 | 5,028,325 | 4,988,325 | 4,966,651 | 5,210,072 | 5,247,170 | 5,471,619 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 | 5,376,624 |
| 2001 | 302,096 | 1,050,043 | 1,500,023 | 1,219,231 | 1,178,913 | 1,082,184 | 1,141,921 | 1,231,921 | 1,243,082 | 1,344,127 | 1,522,137 | 1,490,155 | 1,503,301 | 1,515,771 | 1,415,769 | 1,659,746 | 1,638,565 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | 1,621,524 | |
| 2002 | 200,004 | 652,311 | 588,414 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | | | |
| 2003 | 250,003 | 250,882 | 297,387 | 306,532 | 306,532 | 341,531 | 443,402 | 500,005 | 478,961 | 550,916 | 578,916 | 481,483 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | 552,376 | | | | |
| 2004 | 300,004 | 258,090 | 827,611 | 812,287 | 812,287 | 811,862 | 983,570 | 961,390 | 1,480,232 | 1,690,604 | 1,743,171 | 1,818,773 | 1,859,341 | 2,053,795 | 2,053,795 | 2,053,795 | 2,053,79 | | | | | | | | | | | | | | | | | | | |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Selection of Loss Development Factors

| RY | Development Period in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|------------------------------|---------|---------|---------|---------|---------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----|
| | 12 - 24 | 24 - 36 | 36 - 48 | 48 - 60 | 60 - 72 | 72 - 84 | 84 - 96 | 96 - 108 | 108 - 120 | 120 - 132 | 132 - 144 | 144 - 156 | 156 - 168 | 168 - 180 | 180 - 192 | 192 - 204 | 204 - 216 | 216 - 228 | 228 - 240 | 240 - 252 | 252 - 264 | 264 - 276 | 276 - 288 | 288 - 300 | |
| 1994 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1995 | 1.000 | NA | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 1996 | 0.231 | 1.000 | 1.000 | 2.333 | 2.000 | 1.000 | 0.286 | | | | | | | | | | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1998 | 1.062 | 2.451 | 1.173 | 0.998 | 1.460 | 1.000 | 0.738 | 0.814 | 0.872 | 1.015 | 1.000 | 0.805 | 1.291 | 1.096 | 0.885 | 0.994 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 1999 | 2.490 | 0.658 | 1.022 | 1.103 | 1.251 | 0.943 | 1.026 | 1.041 | 1.044 | 0.966 | 1.024 | 1.015 | 1.000 | 0.964 | 1.015 | 1.000 | 1.023 | 1.012 | 1.055 | | | | | | |
| 2000 | 1.181 | 1.060 | 1.072 | 1.020 | 0.993 | 1.022 | 1.108 | 1.020 | 1.244 | 1.054 | 0.991 | 1.172 | 0.992 | 0.996 | 1.049 | 1.007 | 1.043 | 0.983 | | | | | | | |
| 2001 | 3.476 | 1.429 | 0.813 | 0.967 | 0.918 | 1.055 | 1.079 | 1.009 | 1.081 | 1.132 | 0.972 | 1.016 | 1.008 | 0.934 | 1.172 | 0.987 | 0.990 | | | | | | | | |
| 2002 | 3.261 | 0.902 | 0.742 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 0.549 | | | | | | | |
| 2003 | 1.004 | 1.185 | 1.031 | 1.000 | 1.114 | 1.298 | 1.128 | 0.958 | 1.150 | 1.051 | 1.000 | 0.832 | 1.147 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | |
| 2004 | 0.860 | 3.207 | 0.981 | 1.000 | 0.999 | 1.000 | 1.211 | 0.977 | 1.540 | 1.142 | 1.031 | 1.043 | 1.000 | 1.022 | | | | | | | | | | | |
| 2005 | 0.922 | 0.888 | 1.000 | 0.974 | 1.119 | 1.000 | 1.367 | 0.872 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | | | | | | |
| 2006 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2007 | 0.860 | 1.000 | 0.485 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 2008 | 0.577 | 1.000 | 0.898 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 2009 | 1.000 | 2.119 | 1.000 | 1.000 | 1.346 | 1.260 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | | | |
| 2010 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2011 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2012 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2013 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | NA | 1.000 | 1.000 | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 1.314 | | | | | | | | | | | | | | | | | | | | | | | | |
| VOL WTD 3 | NA | NA | 1.000 | NA | NA | NA | NA | 1.260 | 1.000 | 1.000 | 1.000 | 1.041 | 1.030 | 1.014 | 1.101 | 0.975 | 1.029 | 0.990 | 1.038 | 1.000 | 0.954 | 1.000 | 1.000 | NA | |
| VOL WTD 5 | NA | NA | 1.000 | NA | 1.000 | 1.233 | 1.157 | 1.000 | 1.000 | 1.127 | 1.022 | 0.992 | 1.019 | 0.991 | 1.058 | 0.981 | 1.027 | 0.991 | 1.034 | 1.000 | 0.954 | 1.000 | 1.000 | NA | |
| VOL WTD ALL | 1.521 | 1.166 | 0.981 | 1.017 | 1.079 | 1.022 | 1.040 | 0.989 | 1.163 | 1.060 | 1.005 | 1.065 | 1.002 | 0.990 | 1.058 | 0.980 | 1.026 | 0.991 | 1.034 | 1.000 | 0.954 | 1.000 | 1.000 | NA | |
| ARTH 3 | 1.314 | 1.000 | 1.000 | NA | NA | NA | NA | 1.260 | 1.000 | 1.000 | 1.000 | 1.022 | 1.049 | 1.007 | 1.057 | 0.848 | 1.019 | 0.998 | 1.028 | 1.000 | 0.956 | 1.000 | 1.000 | NA | |
| ARTH 5 | 1.314 | 1.000 | 1.000 | NA | 1.000 | 1.173 | 1.087 | 1.000 | 1.000 | 1.036 | 1.008 | 0.969 | 1.031 | 0.990 | 1.047 | 0.909 | 1.014 | 1.026 | 1.014 | 1.000 | 0.956 | 1.000 | 1.000 | NA | |
| ARTH ALL | 1.374 | 1.377 | 0.944 | 1.107 | 1.143 | 1.051 | 1.016 | 0.974 | 1.078 | 1.042 | 1.030 | 1.000 | 0.995 | 1.022 | 1.105 | 0.927 | 1.008 | 1.021 | 1.014 | 1.000 | 0.956 | 1.000 | 1.000 | NA | |
| 5 YR HI LO | NA | NA | NA | NA | NA | NA | NA | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.021 | 0.996 | 1.012 | 1.006 | 1.000 | NA | NA | NA | |
| 7 YR HI LO | NA | NA | NA | NA | NA | NA | NA | 1.000 | 1.000 | 1.130 | 0.992 | 1.038 | 1.013 | 1.000 | 1.015 | 1.002 | 0.990 | 1.016 | 0.999 | 1.004 | 1.000 | 1.000 | NA | NA | NA |
| ALL YR HI LO | 1.294 | 1.276 | 0.963 | 1.009 | 1.085 | 1.034 | 1.050 | 0.984 | 1.052 | 1.040 | 1.010 | 0.999 | 1.000 | 0.996 | 1.055 | 0.976 | 1.004 | 1.004 | 1.000 | 1.000 | NA | NA | NA | NA | |
| SELECTED | 1.521 | 1.166 | 1.000 | 1.017 | 1.079 | 1.022 | 1.040 | 1.000 | 1.000 | 1.127 | 1.030 | 1.065 | 1.031 | 1.022 | 1.105 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | 1.000 | NA | |

| RY | Development in Months | | | | | | | | | | | | | | | | | | | | | | | | |
|------|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|-----|---|
| | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 | 156 | 168 | 180 | 192 | 204 | 216 | 228 | 240 | 252 | 264 | 276 | 288 | |
| 1994 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| 1995 | 1 | 1 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 106,701 | 106,701 | 106,701 | 85,921 | 110,921 | 121,542 | 107,511 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | 106,826 | | |
| 1996 | 65,000 | 15,001 | 15,001 | 15,001 | 35,001 | 70,001 | 70,001 | 20,000 | - | 50,001 | 53,940 | 67,940 | 67,940 | 67,940 | 102,248 | 108,206 | 108,206 | 119,916 | 119,916 | 119,916 | 109,456 | 109,456 | 109,456 | | |
| 1997 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | |
| 1998 | 282,000 | 299,445 | 733,820 | 861,104 | 859,104 | 1,254,635 | 1,254,635 | 925,870 | 753,994 | 657,142 | 667,199 | 698,719 | 642,886 | 642,886 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,092 | 635,093 | 635,093 | | |
| 1999 | 576,051 | 1,434,131 | 943,131 | 963,453 | 1,062,740 | 1,329,280 | 1,254,083 | 1,286,407 | 1,338,653 | 1,397,656 | 1,350,524 | 1,383,455 | 1,403,917 | 1,403,917 | 1,353,916 | 1,373,691 | 1,373,691 | 1,405,690 | 1,422,494 | 1,500,783 | - | - | - | - | |
| 2000 | 2,102,117 | 2,481,718 | 2,630,090 | 2,819,602 | 2,876,382 | 2,857,665 | 2,921,118 | 3,236,350 | 3,301,716 | 4,107,206 | 4,330,459 | 4,291,056 | 5,028,325 | 4,988,325 | 4,966,651 | 5,210,072 | 5,247,170 | 5,471,619 | 5,376,624 | - | - | - | - | - | |
| 2001 | 302,096 | 1,050,043 | 1,500,023 | 1,219,231 | 1,178,913 | 1,082,184 | 1,141,921 | 1,231,922 | 1,243,082 | 1,344,127 | 1,522,137 | 1,480,155 | 1,503,301 | 1,515,771 | 1,415,769 | 1,659,746 | 1,638,565 | 1,621,524 | - | - | - | - | - | - | |
| 2002 | 200,004 | 652,311 | 588,414 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 436,415 | 239,493 | - | | |
| 2003 | 250,003 | 250,882 | 297,387 | 306,532 | 306,532 | 341,531 | 443,402 | 500,000 | 478,961 | 550,916 | 578,916 | 578,916 | 481,483 | 552,376 | 552,376 | 552,376 | - | - | - | - | - | - | - | - | |
| 2004 | 300,004 | 258,090 | 827,611 | 812,287 | 812,287 | 811,862 | 811,862 | 983,570 | 961,290 | 1,480,232 | 1,690,604 | 1,743,171 | 1,818,773 | 1,818,773 | 1,859,341 | - | - | - | - | - | - | - | - | - | |
| 2005 | 75,000 | 69,181 | 61,467 | 61,467 | 59,884 | 66,985 | 91,585 | 79,838 | 79,838 | 79,838 | 79,838 | 79,838 | 79,838 | 79,838 | 79,838 | - | - | - | - | - | - | - | - | - | |
| 2006 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2007 | 100,001 | 86,012 | 86,012 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | 41,750 | - | | |
| 2008 | 100,000 | 57,687 | 57,687 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | 51,787 | - | | |
| 2009 | 50,001 | 50,001 | 105,943 | 105,943 | 105,943 | 105,943 | 142,619 | 179,761 | 179,761 | 179,761 | 179,761 | 179,761 | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2010 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2011 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2012 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2013 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2014 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2015 | 1 | 195,789 | 195,789 | 195,789 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2016 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2017 | 50,000 | 65,680 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 2018 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Remedial AST

Determination of Pure Premium

| (1) RY | (2) PAID LDM <u>ULTIMATE</u> | (3) INC LDM <u>ULTIMATE</u> | (4) SELECTED <u>ULTIMATE</u> | (5) POTENTIAL <u>SITES</u> | (6) PURE <u>Premium</u> |
|--------------|------------------------------------|-----------------------------------|------------------------------------|----------------------------------|-------------------------------|
| 2008 | 51,787 | 66,060 | 58,924 | 2,055 | 29 |
| 2009 | 268,109 | 258,423 | 263,266 | 2,051 | 128 |
| 2010 | - | - | - | 2,049 | - |
| 2011 | - | - | - | 2,044 | - |
| 2012 | - | - | - | 2,040 | - |
| 2013 | - | - | - | 2,040 | - |
| 2014 | - | - | - | 2,039 | - |
| 2015 | 481,642 | 328,150 | 404,896 | 2,038 | 199 |
| 2016 | - | - | - | 2,038 | - |
| 2017 | 325,861 | 128,301 | 227,081 | 2,037 | 111 |
| 2018 | - | - | - | 2,036 | - |
| TOTAL | 1,127,399 | 780,934 | 954,167 | 22,467 | 42 |

Missouri Petroleum Storage Tank Insurance Fund
 Reserve Study as of June 30, 2018
 Remedial AST
 Paid Bornhuetter-Ferguson Method

| (1) RY | (2) POTENTIAL SITES | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT UNPAID | (8) EXPECTED UNPAID | (9) PAID LOSSES | (10) INDICATED ULTIMATE | (11) INCURRED LOSSES | (12) IBNR RESERVE | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|---------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|--------------------------|---------------------------|-----------------------|-------------------------------|----------------------------|-------------------------|-------------------------|-------------------------------|
| 2008 | 2,055 | 29 | 35 | 89 | 182,372 | 29.5% | 53,728 | 51,787 | 105,515 | 51,787 | 53,728 | - | 51 |
| 2009 | 2,051 | 128 | 153 | 91 | 185,658 | 39.0% | 72,330 | 163,657 | 235,987 | 179,722 | 56,265 | 16,065 | 115 |
| 2010 | 2,049 | - | - | 92 | 189,186 | 44.6% | 84,462 | - | 84,462 | - | 84,462 | - | 41 |
| 2011 | 2,044 | - | - | 94 | 192,499 | 51.5% | 99,070 | - | 99,070 | - | 99,070 | - | 48 |
| 2012 | 2,040 | - | - | 96 | 195,965 | 57.4% | 112,491 | - | 112,491 | - | 112,491 | - | 55 |
| 2013 | 2,040 | - | - | 98 | 199,884 | 62.6% | 125,074 | - | 125,074 | - | 125,074 | - | 61 |
| 2014 | 2,039 | - | - | 100 | 203,782 | 66.1% | 134,602 | - | 134,602 | - | 134,602 | - | 66 |
| 2015 | 2,038 | 199 | 211 | 102 | 207,755 | 70.4% | 146,331 | 142,401 | 288,732 | 195,789 | 92,943 | 53,388 | 142 |
| 2016 | 2,038 | - | - | 104 | 211,910 | 74.7% | 158,292 | - | 158,292 | - | 158,292 | - | 78 |
| 2017 | 2,037 | 111 | 114 | 106 | 216,043 | 83.7% | 180,735 | 53,255 | 233,990 | 65,680 | 168,311 | 12,425 | 115 |
| 2018 | 2,036 | - | - | 108 | 220,255 | 91.0% | 200,523 | - | 200,523 | - | 200,523 | - | 98 |
| TOTAL | 22,467 | | | | 2,205,309 | | 1,367,636 | 411,100 | 1,778,736 | 492,977 | 1,285,759 | 81,877 | 79 |

Pure Premium Selection Trend = 1.020

| | |
|---------------------------|-----|
| 3-Year Average x Latest | 108 |
| 5-Year Average x Latest | 65 |
| All Year Average x Latest | 51 |
| Selected Pure Premium | 108 |

Missouri Petroleum Storage Tank Insurance Fund

Reserve Study as of June 30, 2018

Remedial AST

Incurred Bornhuetter-Ferguson Method

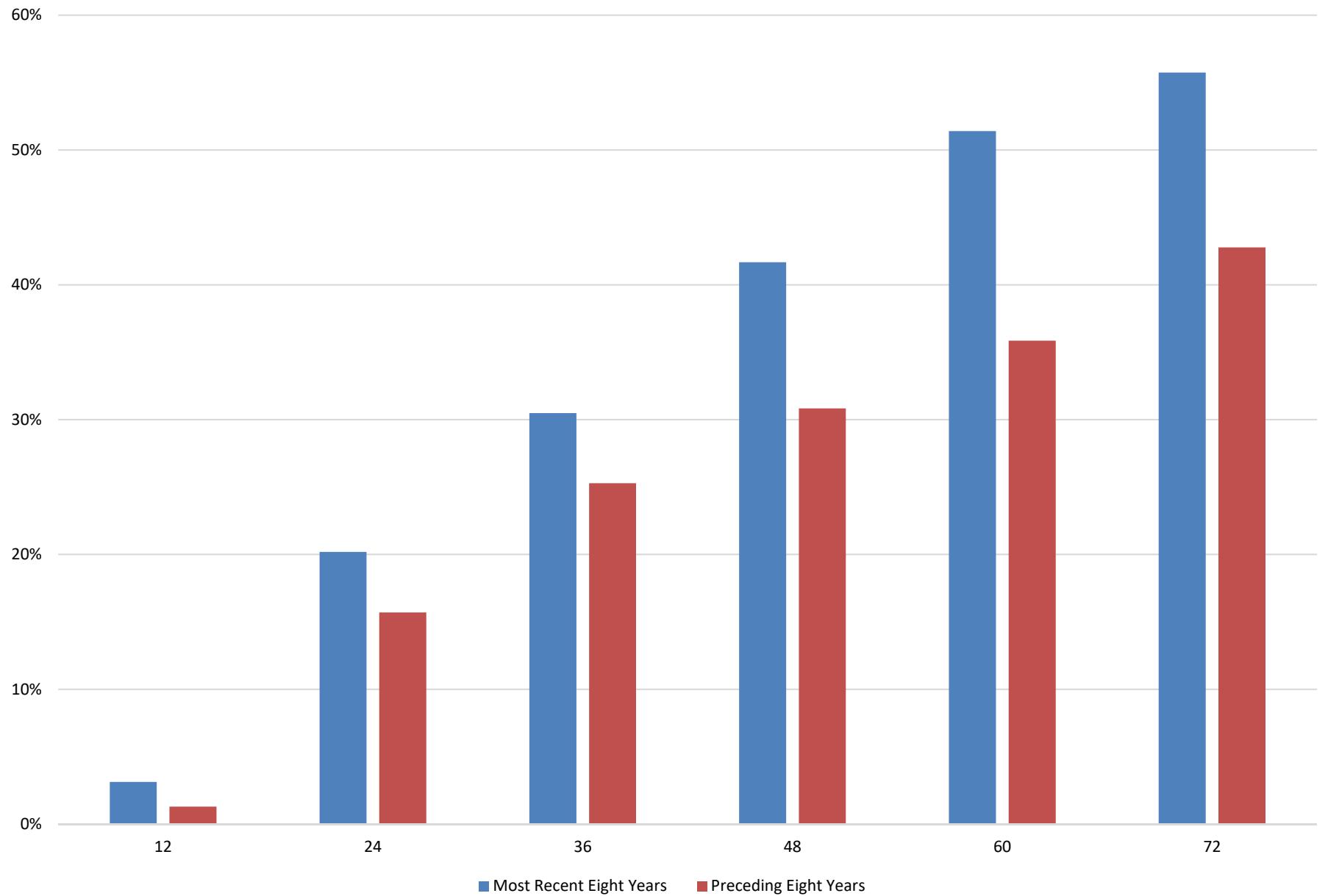
| (1) RY | (2) POTENTIAL SITES | (3) PROJECTED PURE PREM | (4) TRENDED PURE PREM | (5) DETRENDED PURE PREM | (6) EXPECTED LOSSES | (7) PERCENT | (8) EXPECTED IBNR | (9) INCURRED LOSSES | (10) INDICATED ULTIMATE | (11) PAID LOSSES | (12) UNPAID LOSS | (13) CASE RESERVE | (14) ULTIMATE PURE PREM |
|-----------|---------------------------|-------------------------------|-----------------------------|-------------------------------|---------------------------|----------------|-------------------------|---------------------------|-------------------------------|------------------------|------------------------|-------------------------|-------------------------------|
| 2008 | 2,055 | 29 | 35 | 89 | 182,372 | 21.6% | 39,405 | 51,787 | 91,192 | 51,787 | 39,405 | - | 44 |
| 2009 | 2,051 | 128 | 153 | 91 | 185,658 | 30.5% | 56,541 | 179,722 | 236,263 | 163,657 | 72,606 | 16,065 | 115 |
| 2010 | 2,049 | - | - | 92 | 189,186 | 30.5% | 57,616 | - | 57,616 | - | 57,616 | - | 28 |
| 2011 | 2,044 | - | - | 94 | 192,499 | 30.5% | 58,624 | - | 58,624 | - | 58,624 | - | 29 |
| 2012 | 2,040 | - | - | 96 | 195,965 | 33.1% | 64,913 | - | 64,913 | - | 64,913 | - | 32 |
| 2013 | 2,040 | - | - | 98 | 199,884 | 34.6% | 69,065 | - | 69,065 | - | 69,065 | - | 34 |
| 2014 | 2,039 | - | - | 100 | 203,782 | 39.3% | 80,135 | - | 80,135 | - | 80,135 | - | 39 |
| 2015 | 2,038 | 199 | 211 | 102 | 207,755 | 40.3% | 83,799 | 195,789 | 279,588 | 142,401 | 137,187 | 53,388 | 137 |
| 2016 | 2,038 | - | - | 104 | 211,910 | 40.3% | 85,475 | - | 85,475 | - | 85,475 | - | 42 |
| 2017 | 2,037 | 111 | 114 | 106 | 216,043 | 48.8% | 105,447 | 65,680 | 171,126 | 53,255 | 117,871 | 12,425 | 84 |
| 2018 | 2,036 | - | - | 108 | 220,255 | 66.3% | 146,106 | - | 146,106 | - | 146,106 | - | 72 |
| TOTAL | 22,467 | | | | 2,205,309 | | 847,125 | 492,977 | 1,340,102 | 411,100 | 929,002 | 81,877 | 60 |

Pure Premium Selection

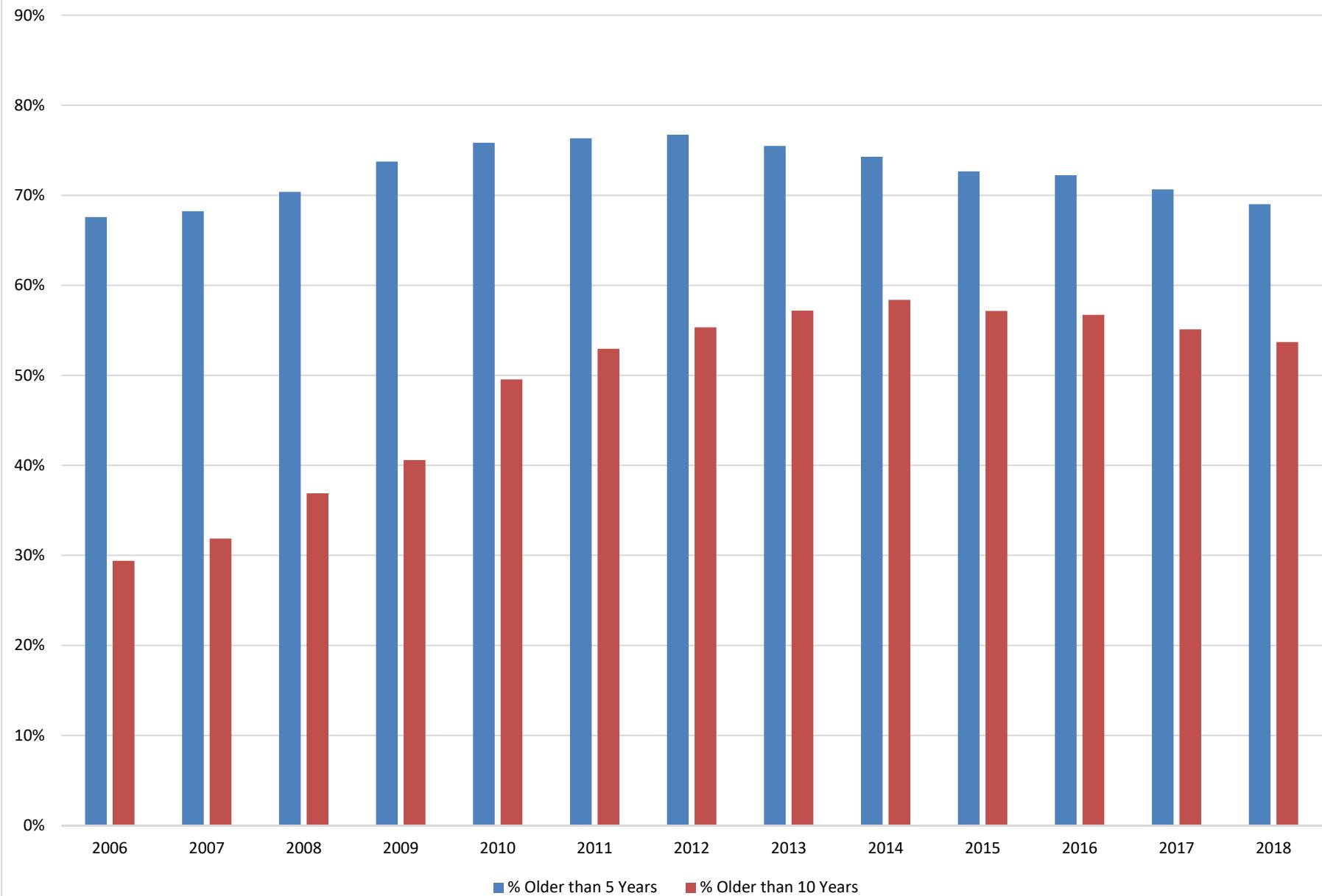
Trend = 1.020

| | |
|---------------------------|-----|
| 3-Year Average x Latest | 108 |
| 5-Year Average x Latest | 65 |
| All Year Average x Latest | 51 |
| Selected Pure Premium | 108 |

Percent of Total Reported Claims Closed with Payment in First 72 Months After Report



Backlog of Claims Older than 5 or 10 Years as a Percent of Total Open



Backlog of Claims Older than 5 or 10 Years, Absolute Quantities

